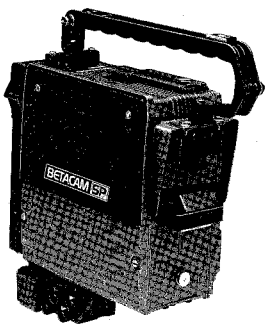
SONY

VIDEOCASSETTE RECORDER

BVV-5PS



BETACAM SP

MAINTENANCE MANUAL

Volume 2 2nd Edition (Revised 16)

Serial No. 10661 and Higher

EBU N-10 LEVEL

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BLOCK DIAGRAMS

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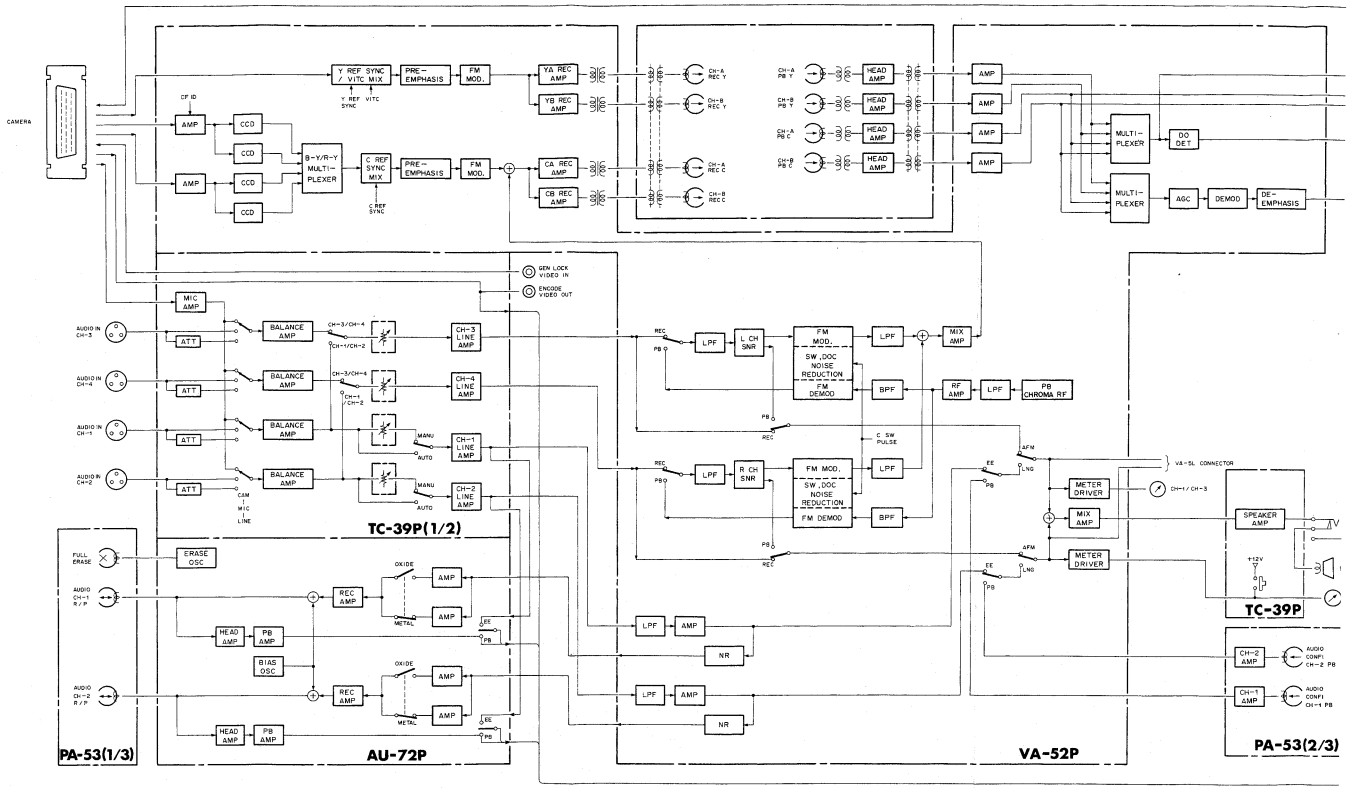
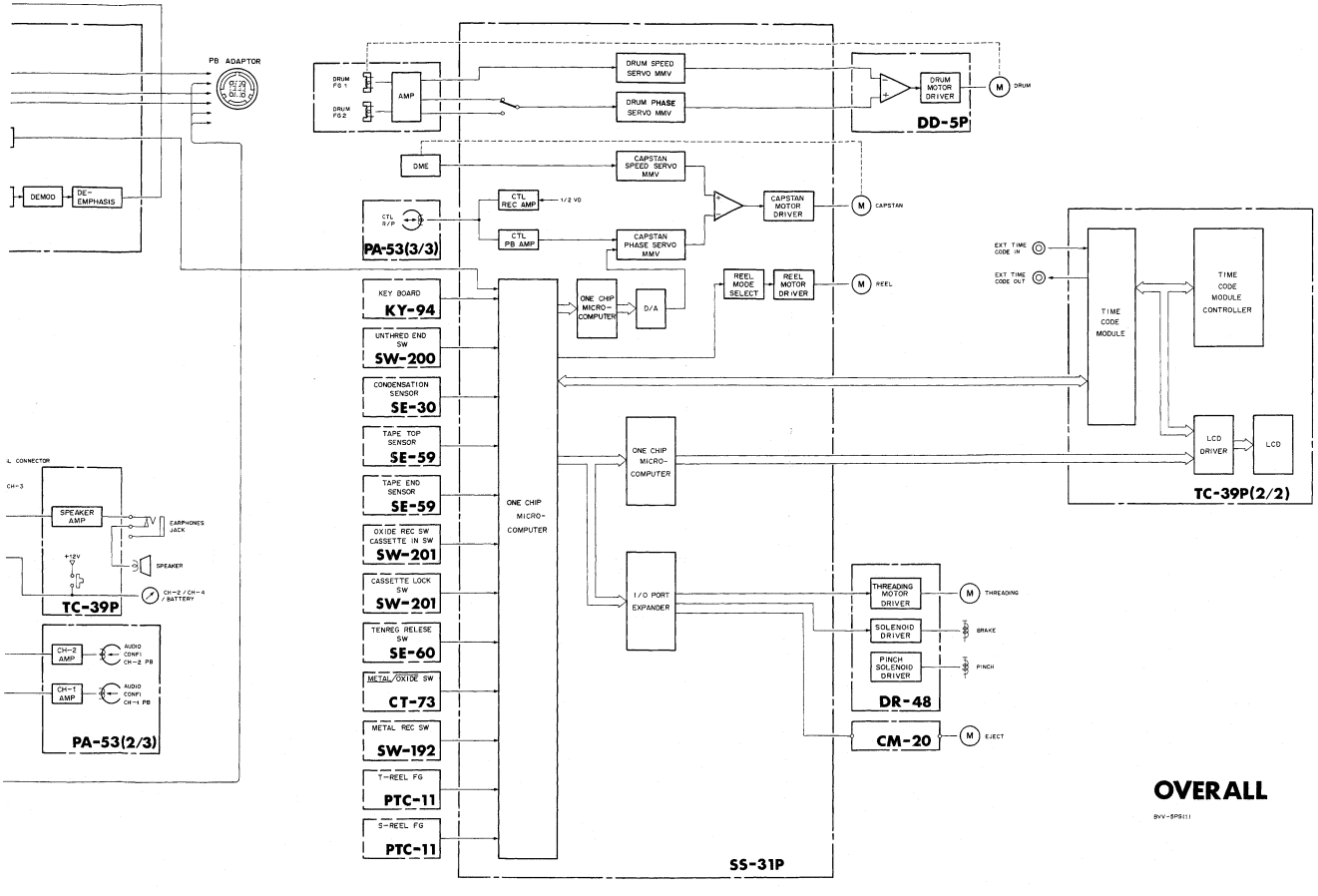
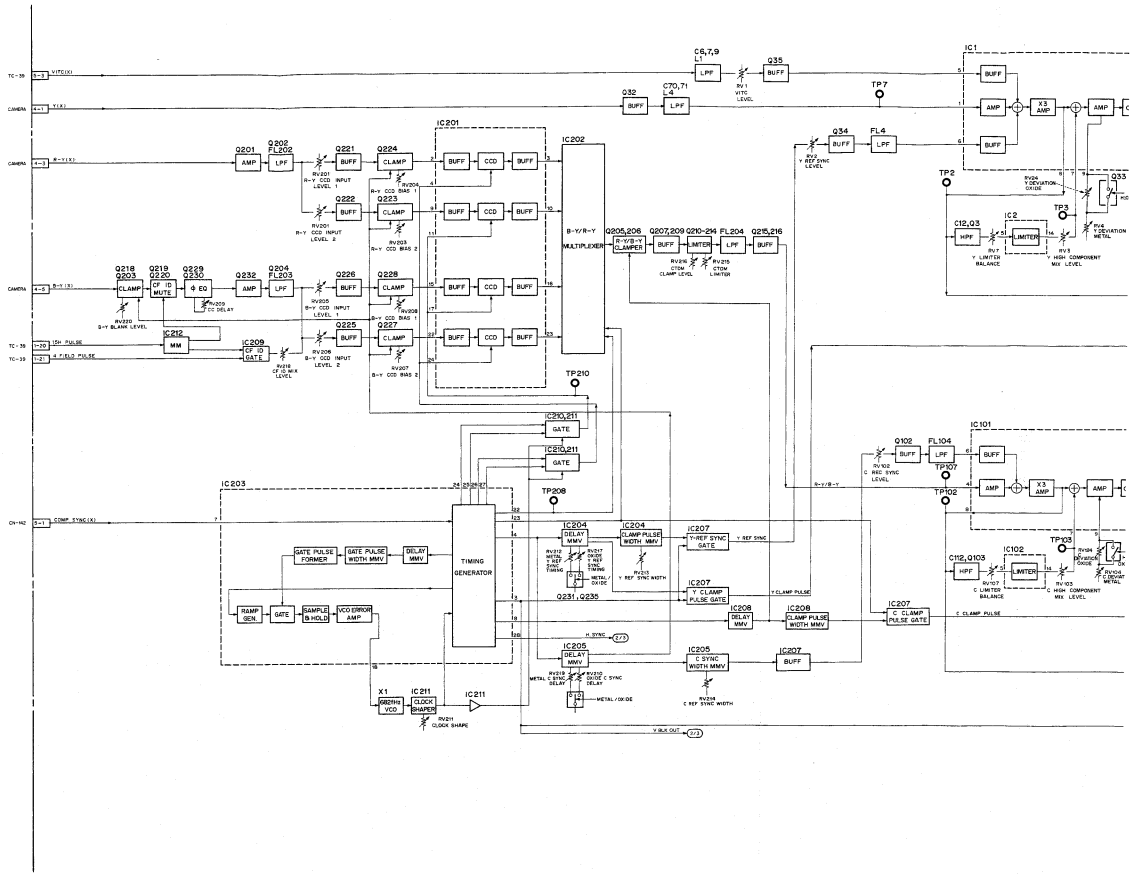




OVERALL

8VV-SP9(1)

VIDEO (1/2)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SAMPLE & HOLD
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VCO
CLOCK SHAPER
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4 EQ
MM
CF Q GATE
CLAMP
BUFF
AMP
LPF
HPF
LIMITER
CCD
X3 AMP
CAMERA
VITC(X)
Y(X)
R-Y(X)
B-Y(X)
COMP SYNC(X)
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4 FIELD PULSE
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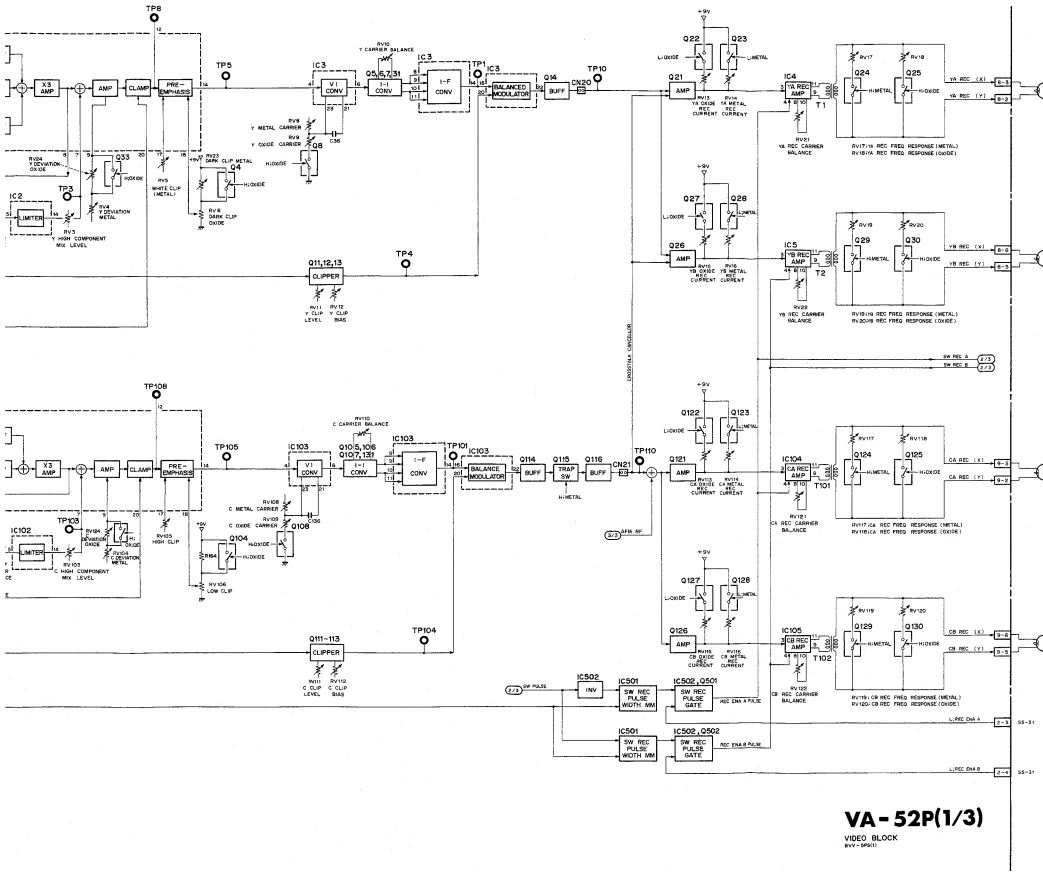
Y REF SYNC
Y CLAMP PULSE
C CLAMP PULSE
Y REF SYNC GATE
Y CLAMP PULSE GATE
C CLAMP PULSE GATE
C SYNC WIDTH MMV
CLAMP PULSE WIDTH MMV
CLAMP PULSE WIDTH MMV
R-Y/B-Y CLAMPER
R-Y/B-Y


TP8
TP5
TP3
TP4
TP10
TP108
TP105
TP103
TP104
TP101
TP110
X3 AMP
AMP
CLAMP
PRE-EMPHASIS
LIMITER
I-I CONV
V-I CONV
I-F CONV
BALANCED MODULATOR
BUFF
CLIPPER
TRAP SW
INV
SW REC PULSE WIDTH MM
SW REC PULSE GATE
YA REC AMP
YB REC AMP
CA REC AMP
CB REC AMP
+9V
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H:OXIDE
L:OXIDE
L:METAL
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SW REC B
L REC ENA A
L REC ENA B
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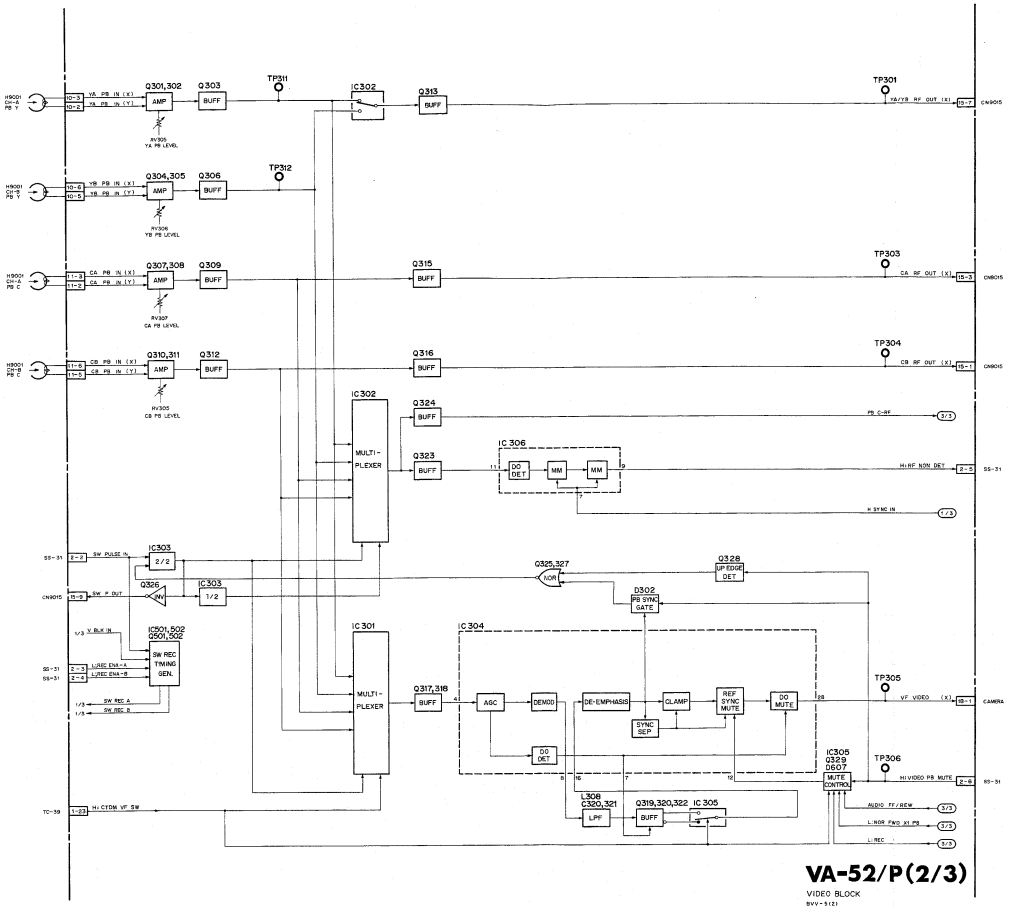
Q301,302
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Q303
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TP311
IC302
Q313
BUFF
TP301
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RV305
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MULTI-
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Q324
BUFF
Q323
BUFF
PB C-RF
HI-RF NON DET
H SYNC IN
IC306
DO
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MM
IC303
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L-REC
HI CTDM VF SW
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VIDEO BLOCK
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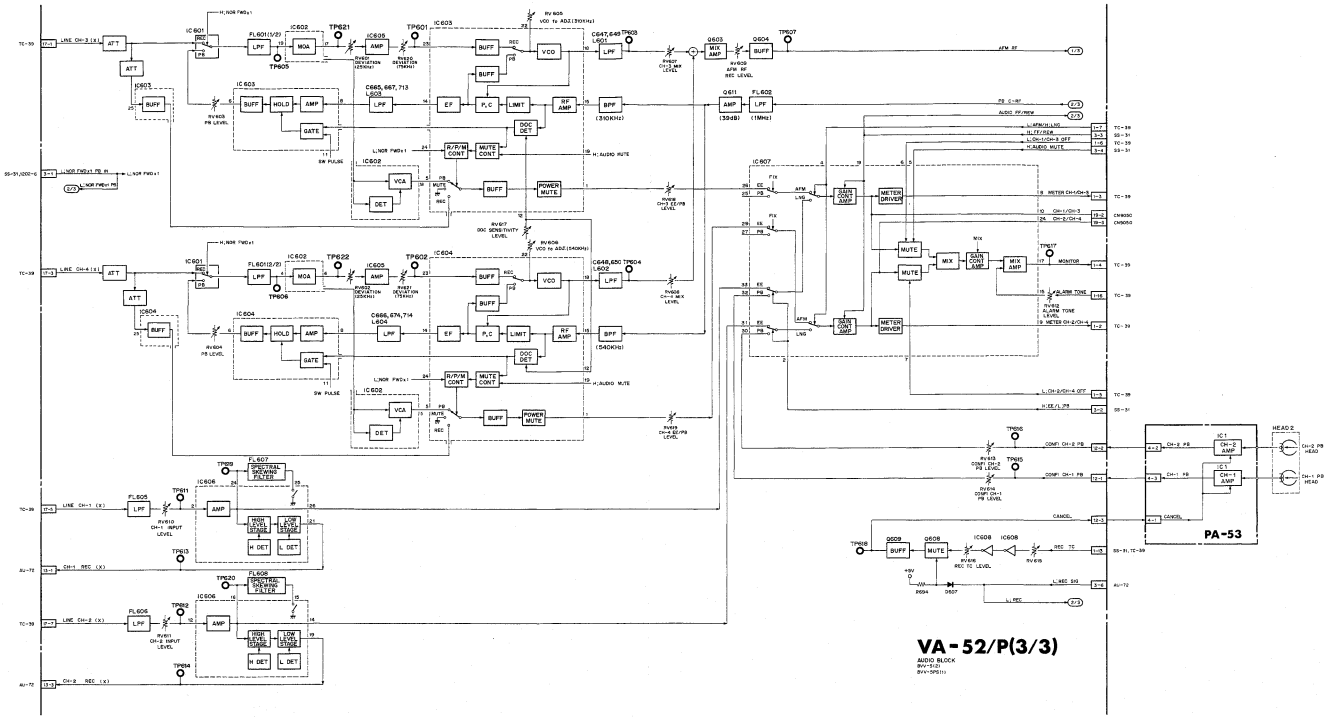
SVV-SP51(1)

AUDIO (1/3)


VA-52/P(3/3)
AUDIO BLOCK
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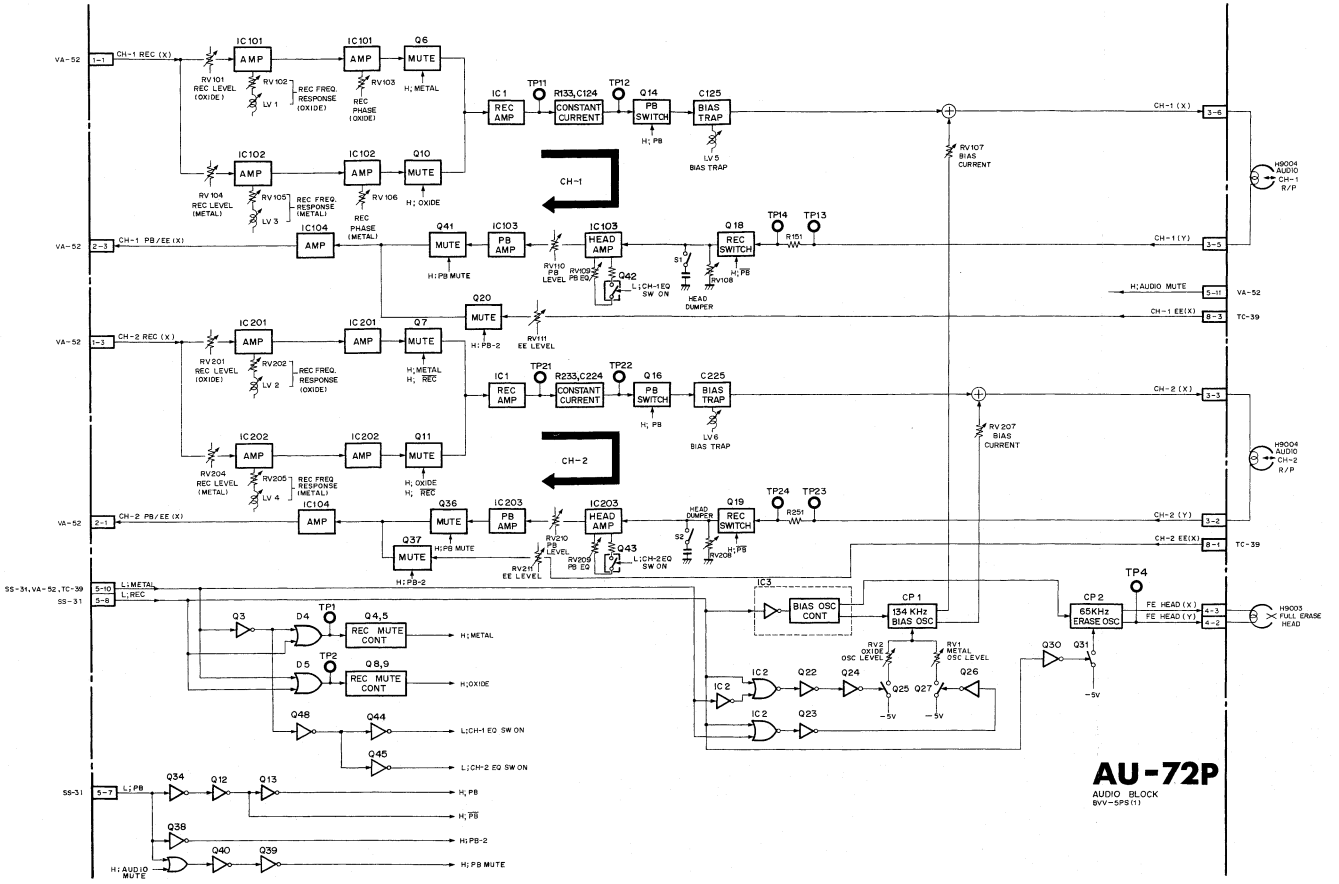
IC1000

AUDIO (2/3)


CH-1
CH-2
AU-72P
AUDIO BLOCK
BVV-SPS(1)
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IC102
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IC203
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Q27
Q30
Q31
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TP4
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TP21
TP22
TP23
TP24
CP1
CP2
134 KHz BIAS OSC
65KHz ERASE OSC
BIAS OSC CONT
REC AMP
CONSTANT CURRENT
PB SWITCH
REC SWITCH
BIAS TRAP
PB AMP
HEAD AMP
MUTE
AMP
H; METAL
H; OXIDE
H; PB
H; PB MUTE
H; PB-2
H; AUDIO MUTE
L; CH-1 EQ SW ON
L; CH-2 EQ SW ON
CH-1 (X)
CH-1 (Y)
CH-1 EE(X)
CH-2 (X)
CH-2 (Y)
CH-2 EE(X)
FE HEAD (X)
FE HEAD (Y)
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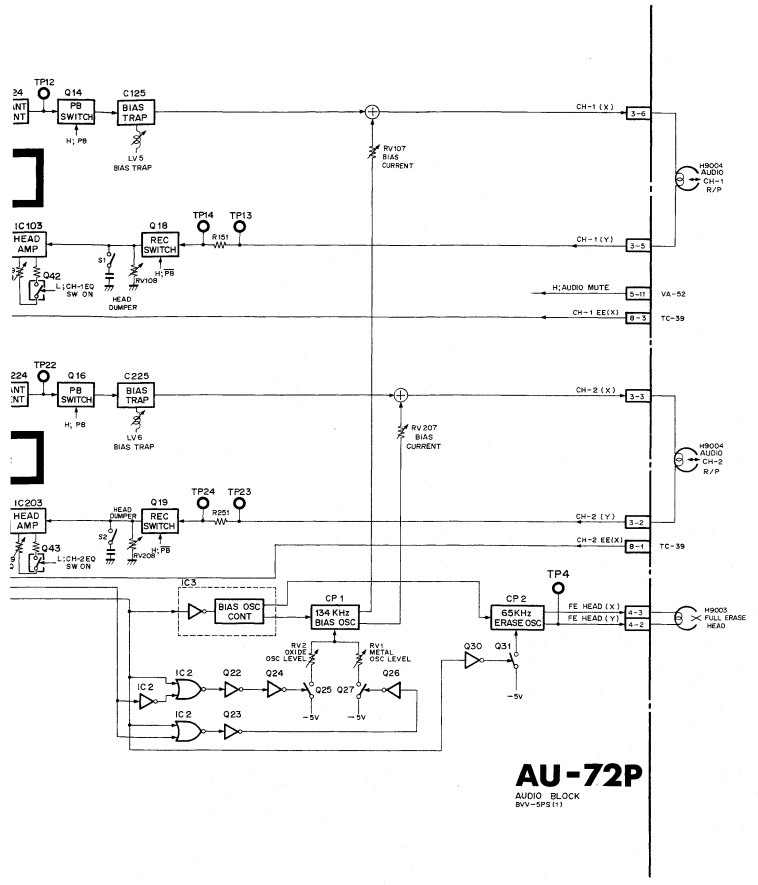
H9004 AUDIO CH-2 R/P
H9003 FULL ERASE HEAD
VA-52
TC-39
SS-31



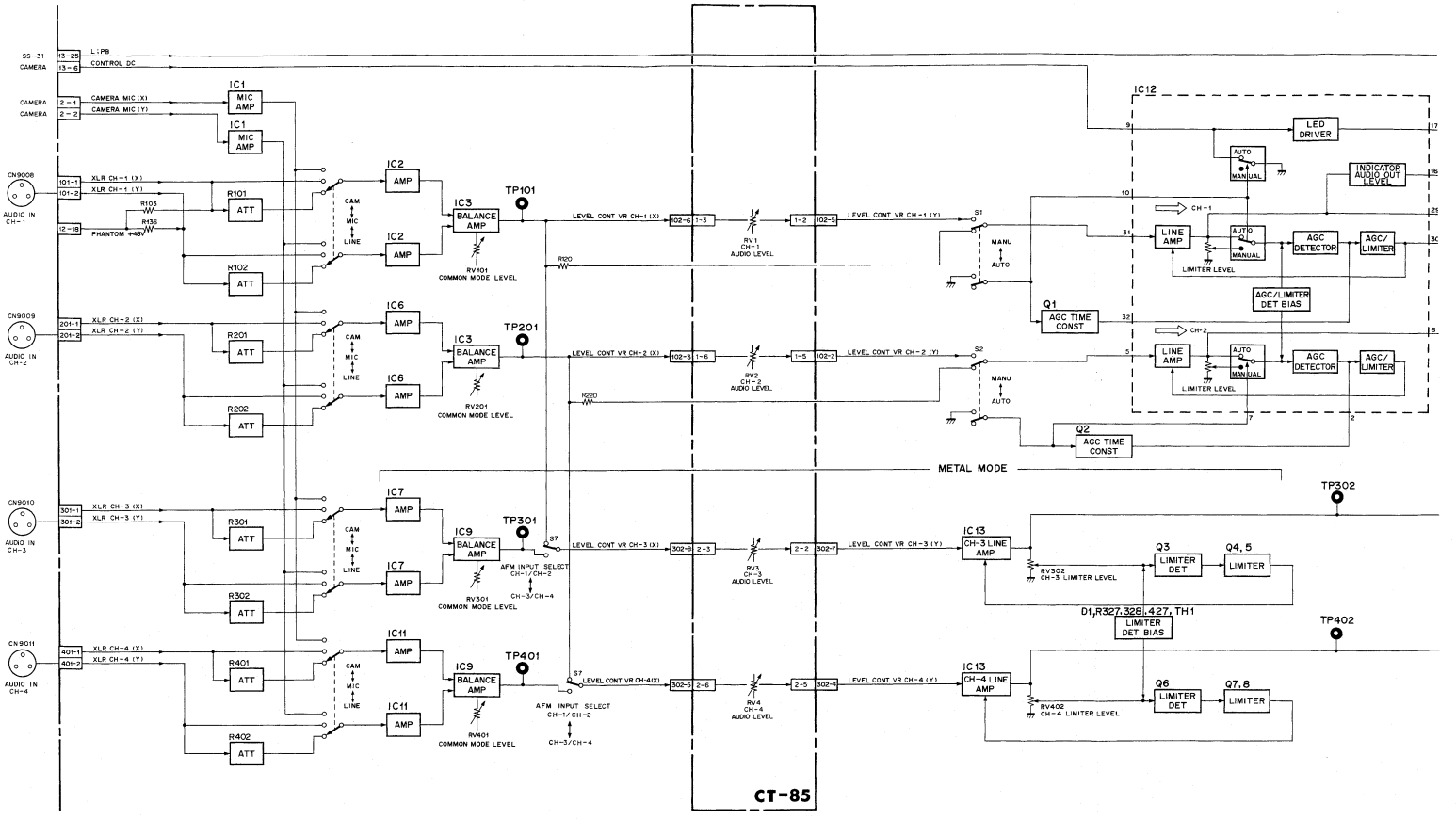
AU-72P

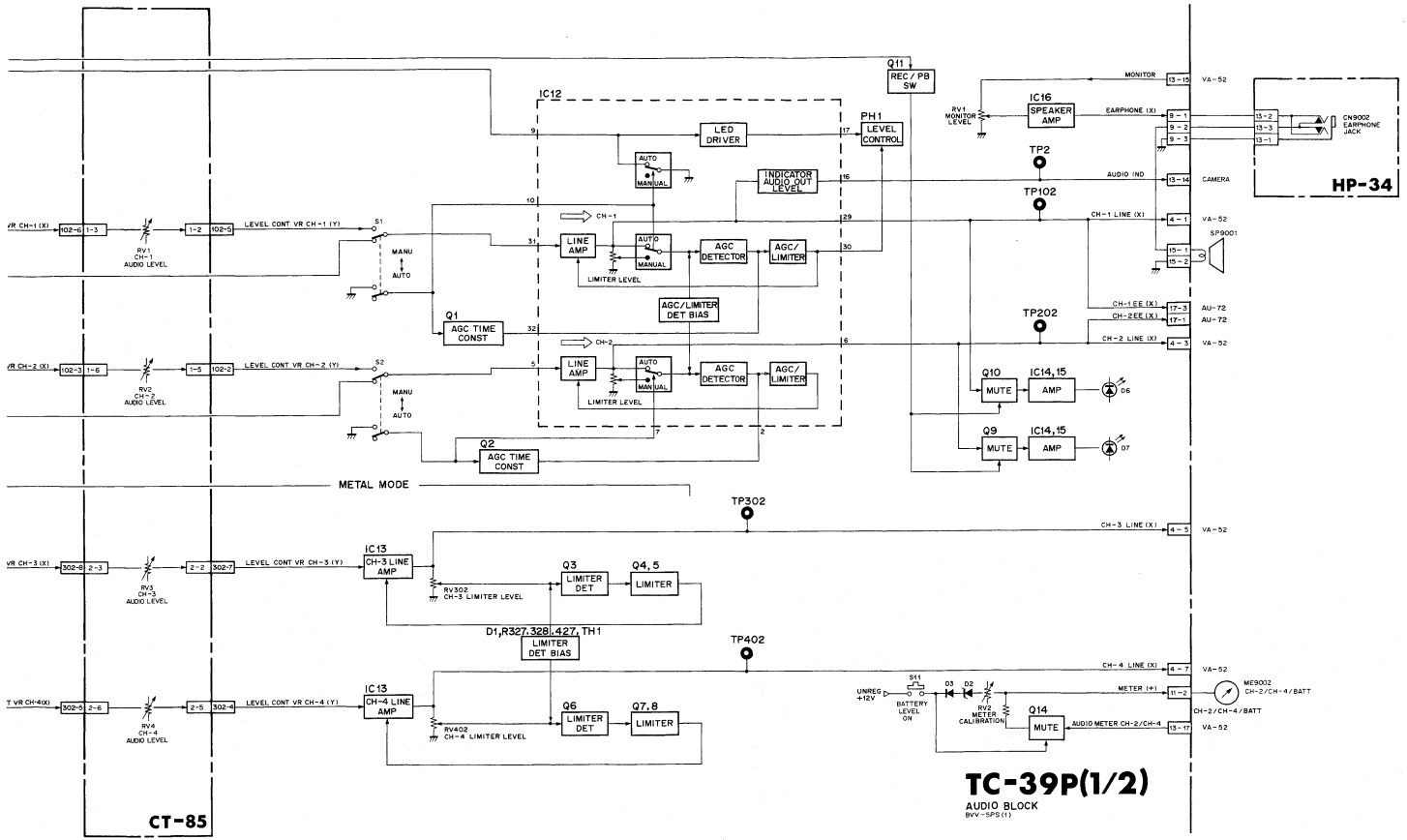
AUDIO BLOCK
8VV-5PS(1)

AUDIO (3/3)

AUDIO (3/3)

AUDIO (3/3)




IC12
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INDICATOR AUDIO OUT LEVEL
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PH1
REC / PB SW
Q11
LINE AMP
AGC DETECTOR
AGC/ LIMITER
LIMITER LEVEL
AGC/LIMITER DET BIAS
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MANU
AUTO
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Q2
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LEVEL CONT VR CH-2 (Y)
LEVEL CONT VR CH-3 (Y)
LEVEL CONT VR CH-4 (Y)
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CH-1EE (X)
CH-2EE (X)
CH-2 LINE (X)
CH-3 LINE (X)
CH-4 LINE (X)
MONITOR
EARPHONE (X)
METER (+)
AUDIO METER CH-2/CH-4
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RV1 MONITOR LEVEL
CN9002 EARPHONE JACK
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D7
S41
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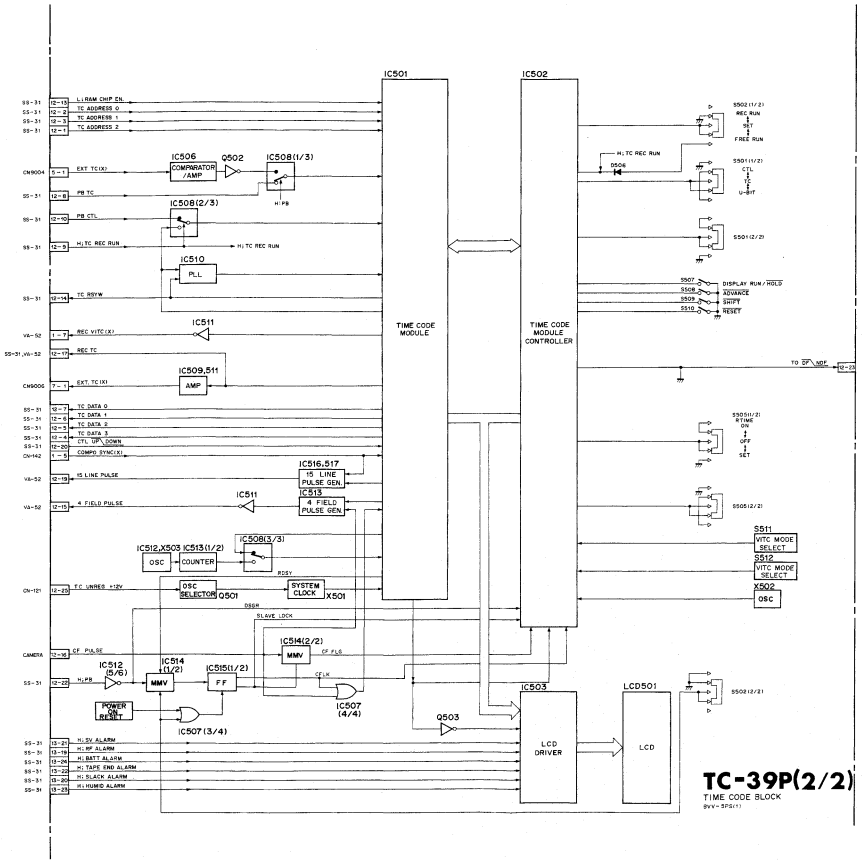
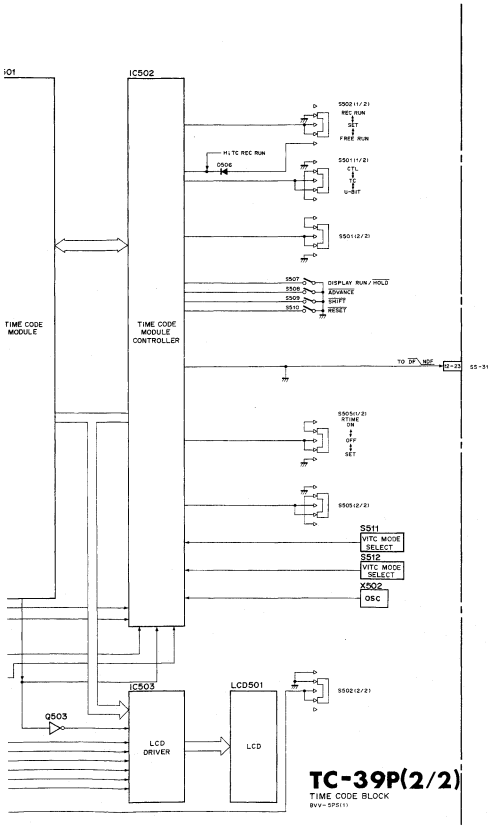
UNREG +12V
D3
D2
RV2 METER CALIBRATION
Q14
ME9002 CH-2/CH-4/BATT
CH-2/CH-4/BATT
VA-52
AU-72
HP-34
CT-85
TC-39P(1/2)
AUDIO BLOCK
BVV-SPS(1)

TIME CODE

S/N up to 11506




IC502
S502(1/2)
REC RUN
SET
FREE RUN
M/TC REC RUN
DIODE
S501(1/2)
CTL
SET
U-BIT
S501(2/2)
S507
DISPLAY RUN/HOLD
S508
ADVANCE
S509
SHIFT
S510
RESET
TIME CODE MODULE
TIME CODE MODULE CONTROLLER
TO DP MDE
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S5-31
S505(1/2)
RTIME
ON
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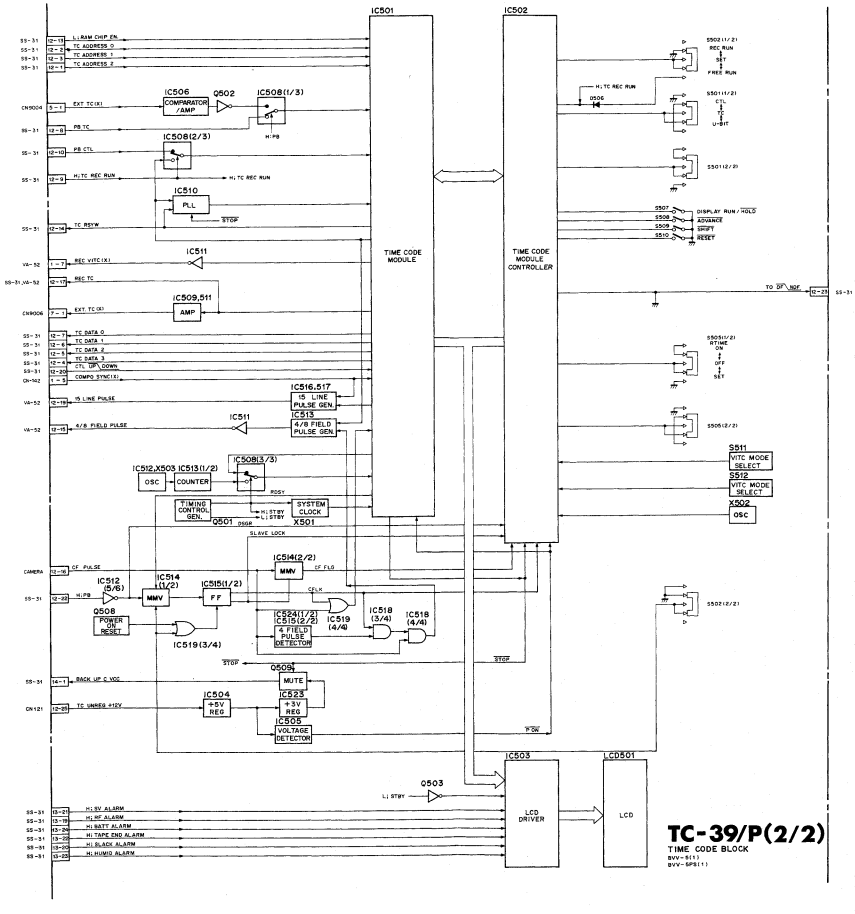
LCD
TC-39P(2/2)
TIME CODE BLOCK
BVV-SP511

TIME CODE

S/N 11507 and higher



TC-39/P(2/2)

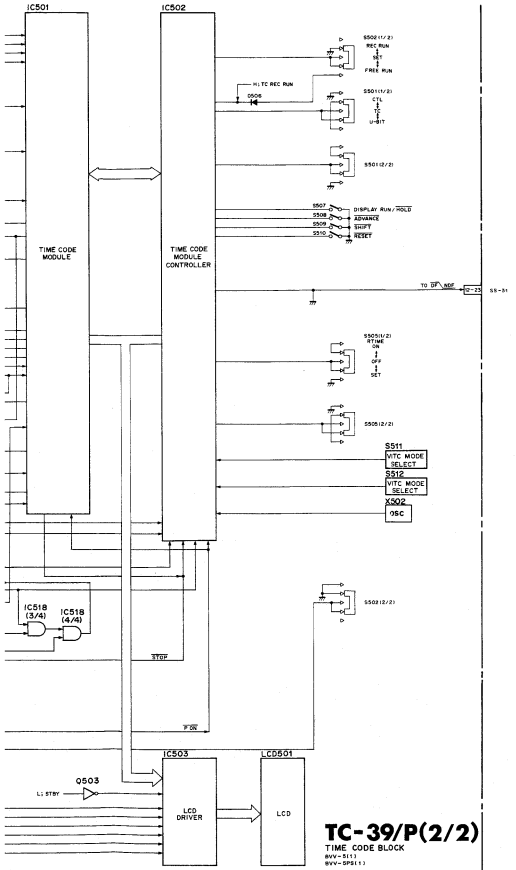
TIME CODE BLOCK

BVV-5(1)

BVV-5PS(1)

12-19 (b)

12-20 (b)



TC-39/P(2/2)

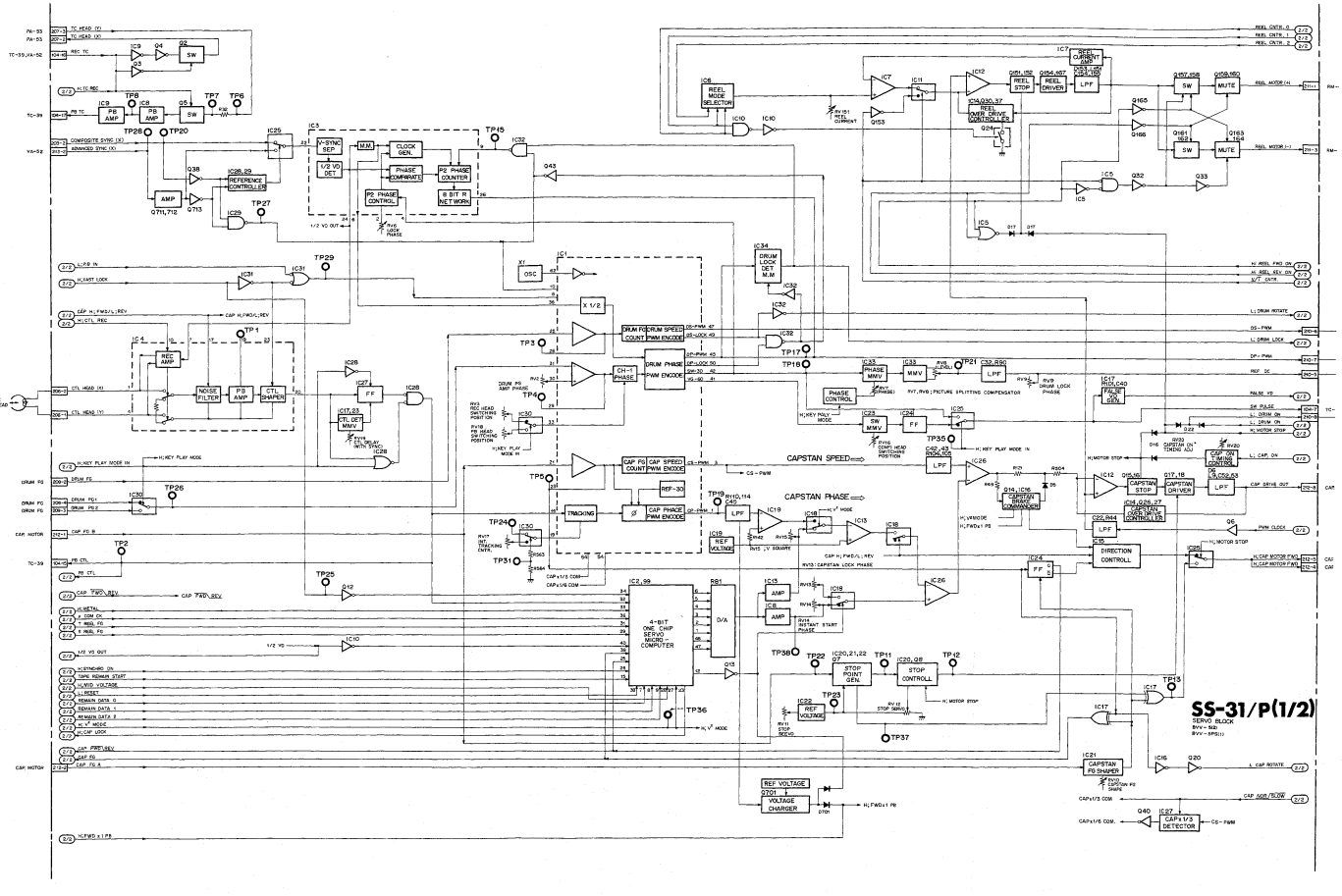
TIME CODE BLOCK

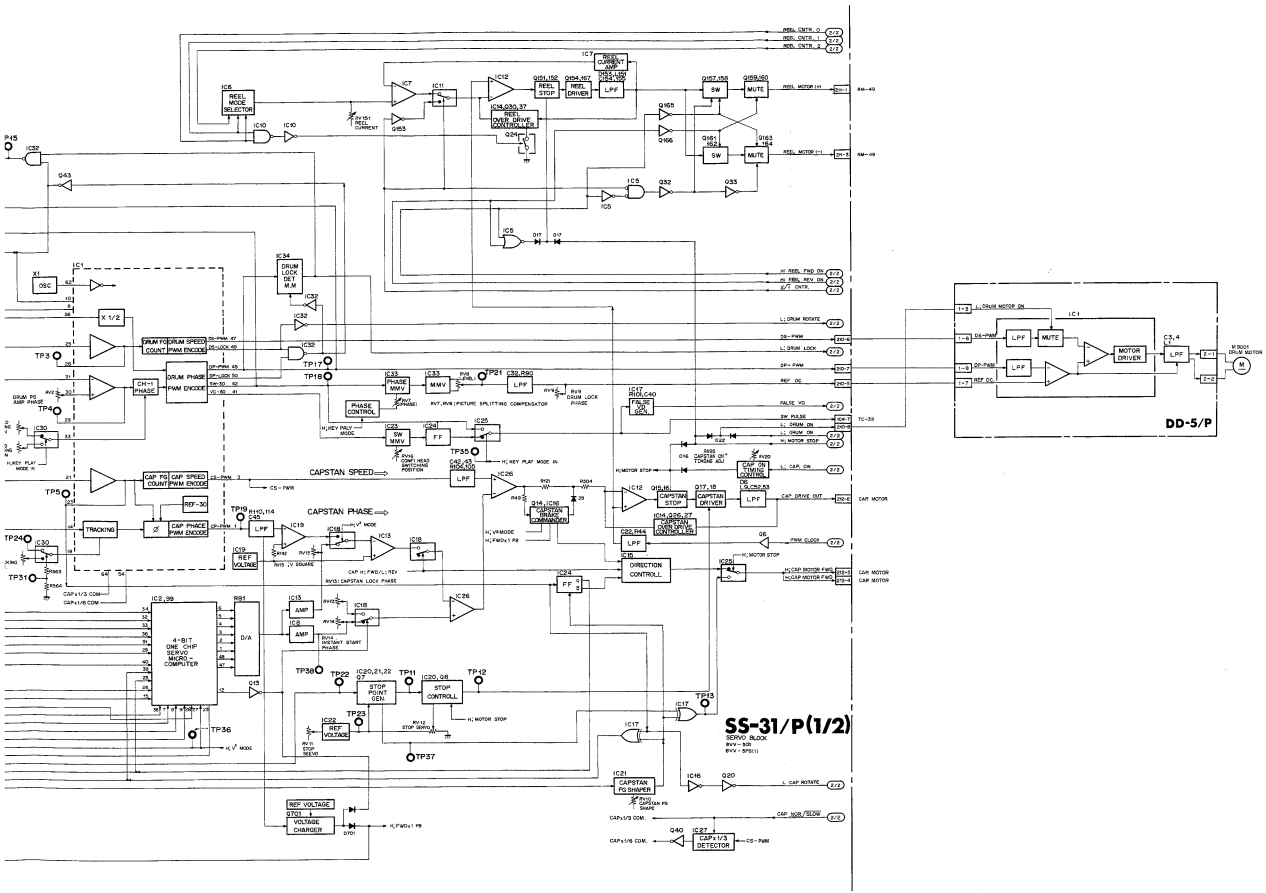
BVV-511
BVV-SP511

12-20 (b)

SERVO

SERVO

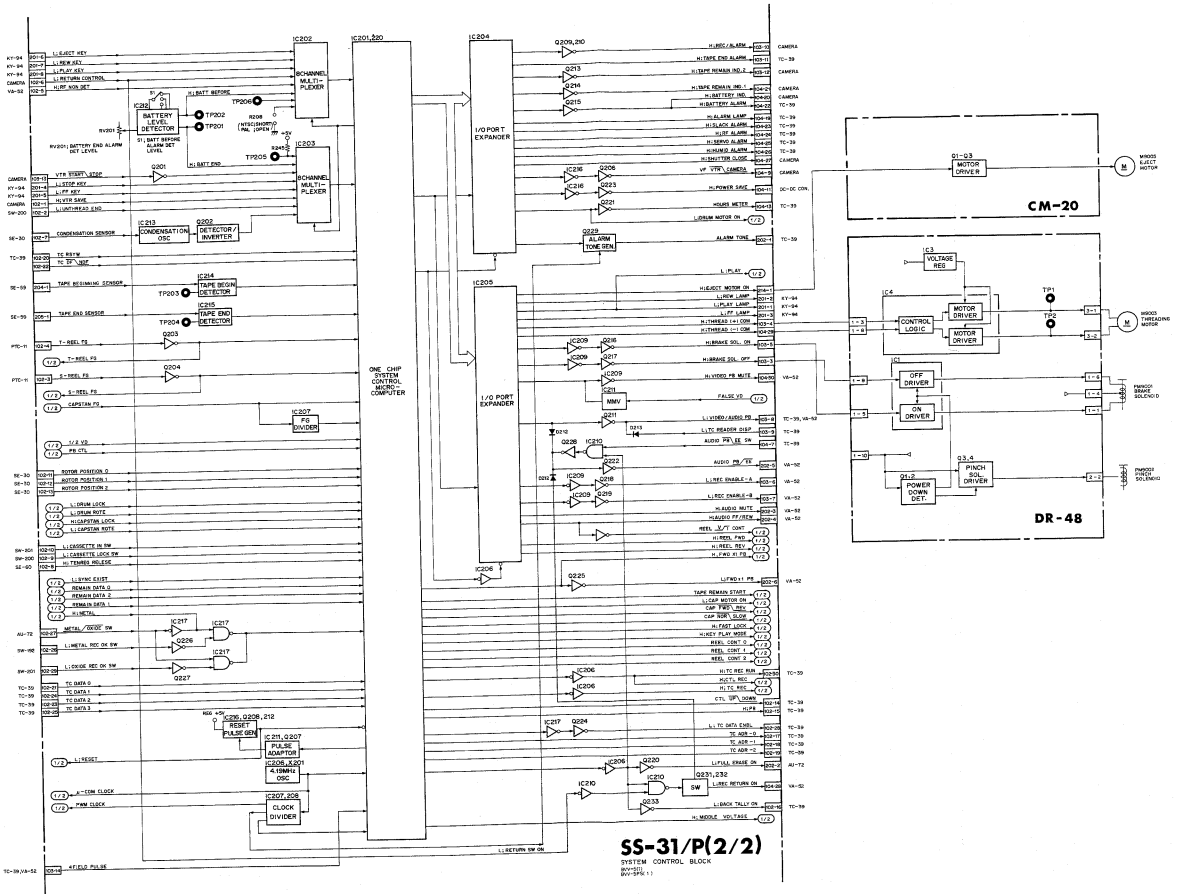

4-BIT ONE CHIP SERVO MICRO-COMPUTER
SS-31/P(1/2)
SERVO BLOCK
CAPSTAN SPEED
CAPSTAN PHASE
DRUM PHASE
PWM ENCODE
REEL MOTOR
CAPSTAN MOTOR
DRUM MOTOR


SS-31/P(1/2)
SERVO BLOCK
DD-5/P
CAPSTAN SPEED
CAPSTAN PHASE
4-BIT ONE CHIP SERVO MICRO-COMPUTER
REEL MODE SELECTOR
REEL OVER DRIVE CONTROLLER
REEL DRIVER
REEL CURRENT AMP
DRUM LOCK DET/ M.M
DRUM PHASE PWM ENCODE
CAP FG COUNT
CAP SPEED PWM ENCODE
CAP PHASE PWM ENCODE
TRACKING
REF VOLTAGE
PHASE CONTROL
SW SWITCHING POSITION
CAPSTAN SWITCHING CONTROL
CAPSTAN STOP
CAPSTAN DRIVER
CAPSTAN OVER DRIVE CONTROLLER
DIRECTION CONTROLL
STOP POINT GEN
STOP CONTROLL
CAPSTAN FG SHAPER
CAP1/3 DETECTOR
VOLTAGE CHARGER
MOTOR DRIVER
MUTE
LPF
SW
D/A
AMP
FF
OSC

12-23

12-24

SYSTEM CONTROL



SECTION 13
SEMICONDUCTOR ELECTRODES

ここに記載されている IC，トランジスタ，ダイオードは，それぞれの機能を等価的に表わしたものです。したがって互換性を表わすものではありません。(互換性のない型名が併記されている事もあります。) 部品の交換をする時は，SPARE PARTS の章を参照して下さい。

ICs, transistors and diodes whoses functions are equivalent are described here. Therefore, incompatible device names may be described together. For parts replacement, refer to the Spare Parts section in this manual.

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CXA1041M	13-3
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MC14557BF	13-4
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NJM2043M-D	13-4
NJM2903M	13-4
NJM386M	13-4
NJM4556M-A	13-4
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NJM78??A	13-10
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SN74LS221NS	13-10
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TC4071BF	13-6
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TC74HC04F	13-7
TC74HC221F	13-7
TC74HC32F	13-7
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2SA812	13-12
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2SB733	13-12
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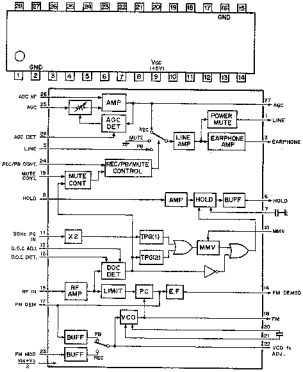
等価回路は IC メーカーの Data Book に従いました。

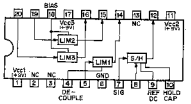
The circuit diagram of each IC is obtained from the IC data book published by the manufacturer.

IC

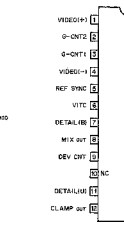
AN6391NS (MATSUSHITA) FLAT PACKAGE
AUDIO FM REC/PB AMP
— TOP VIEW —



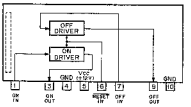
CXA1039AM (SONY) FLAT PACKAGE
DETAIL ENHANCER LIMITER
— TOP VIEW —



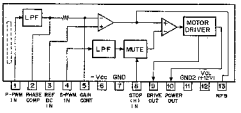
CXA1040M (SONY) MINI FLAT PACKAGE
VIDEO SIGNAL PROCESSOR
— TOP VIEW —



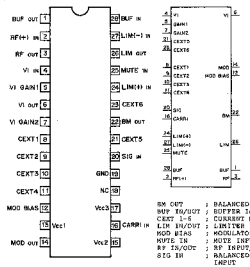
BX1071 (SONY)
PLUNGER DRIVER
— REAR VIEW —



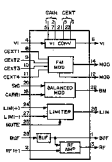
BX1164 (SONY)
DRUM PWM
— REAR VIEW —



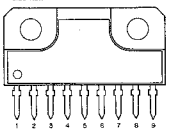
CXA1041M (SONY) MINI FLAT PACKAGE
FM MODULATOR
— TOP VIEW —

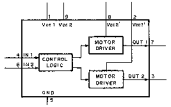


BM OUT ; BALANCED MODULATOR OUTPUT
BUF IN/OUT ; BUFFER INPUT/OUTPUT
CEXT 1-6 ; CURRENT MILLER EXIT 1-6
LIM IN/OUT ; LIMITER INPUT/OUTPUT
MOD BIAS ; MODULATOR BIAS
MUTE IN ; MUTE INPUT
RF IN/OUT ; RF INPUT/OUTPUT
SIG IN ; BALANCED MODULATOR SIGNAL INPUT



M54543L (MITSUBISHI)
BI-DIRECTIONAL MOTOR DRIVER
— SIDE VIEW —

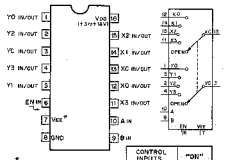




IN1	IN2	MODE
1	2	1 2
0	0	1 2 NO OPERATION
1	0	1 3 ROTATION
0	1	2 1 REVERSE ROTATION
1	1	0 0 BRAKE

0 : LOW LEVEL
1 : HIGH LEVEL
2 : HIGH IMPEDANCE

M68A0628FP (FUJITSU) FLAT PACKAGE
TD40628F (TOSHIBA) FLAT PACKAGE
uPD40628G (NEC) FLAT PACKAGE
D-MOS 4-CHANNEL MULTIPLEXER/DEMULTIPLEXER
— TOP VIEW —

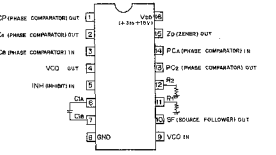


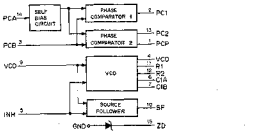
VEE* ; VGND-VEE = +3 to +8V

CONTROL INPUTS			"ON" CHANNEL
EN	B	A	
0	0	0	0
0	0	1	1
0	1	0	2
0	1	1	3
1	X	X	OPEN

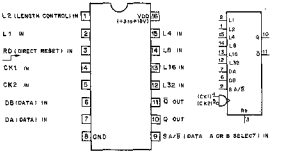
0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE.

MC14046BF (MOTOROLA) FLAT PACKAGE
C-MOS PHASE LOCKED LOOP
— TOP VIEW —





MC14557BF (MOTOROLA) FLAT PACKAGE
C-MOS 1-TO-64-BIT VARIABLE LENGTH SHIFT REGISTER
— TOP VIEW —



LENGTH SELECT TRUTH TABLE

L32	L16	L8	L4	L2	L1	REGISTER LENGTH
0	0	0	0	0	0	1 - BIT
0	0	0	0	0	1	2 - BIT
0	0	0	0	1	0	3 - BIT
0	0	0	0	1	1	4 - BIT
0	0	0	1	0	0	5 - BIT
1	1	1	1	0	0	61 - BIT
1	1	1	1	0	1	62 - BIT
1	1	1	1	1	0	63 - BIT
1	1	1	1	1	1	64 - BIT

INPUTS				OUTPUT
RD	B/A	CK1	CK2	Q
0	0	⊓	0	DB
0	1	⊓	0	DA
0	0	1	⊔	DB
0	1	1	⊔	DA
1	X	X	X	0

0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE

NJM2041M-D (JRC) FLAT PACKAGE
OPERATIONAL AMPLIFIER
— TOP VIEW —

NJM2043M-D (JRC) FLAT PACKAGE
OPERATIONAL AMPLIFIER
— TOP VIEW —

NJM2903M (JRC) FLAT PACKAGE
VOLTAGE COMPARATOR
— TOP VIEW —

NJM386M (JRC) FLAT PACKAGE
AUDIO POWER AMPLIFIER
— TOP VIEW —

NJM4558M-A (JRC) FLAT PACKAGE
OPERATIONAL AMPLIFIER
— TOP VIEW —

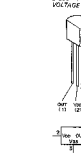
NJM4560M (JRC) FLAT PACKAGE
OPERATIONAL AMPLIFIER
— TOP VIEW —

NJM78L??A (NEC)
μPC78L??J(NEC)
POSITIVE VOLTAGE REGULATOR (100mA)

OUTPUT VOLTAGE				
+2.6V	NJM78L02A	uA78L02ACL	uA78L26AMV	----------
+4V	----------	----------	----------	AN78L04
+5V	NJM78L05A	uA78L05ACL	uA78L05AMV	uPC78L05J
+6V	NJM78L06A	----------	----------	AN78L06
+6.2V	----------	uA78L06ACL	uA78L62AMV	----------
+7V	----------	----------	----------	AN78L07
+8V	NJM78L08A	uA78L08ACL	----------	uPC78L08J
+8.2V	----------	----------	uA78L82AMV	----------
+9V	NJM78L09A	uA78L09ACL	uA78L09AMV	----------
+10V	----------	uA78L10ACL	----------	uPC78L10J
+12V	NJM78L12A	uA78L12ACL	uA78L12AMV	uPC78L12J
+15V	NJM78L15A	uA78L15ACL	uA78L15AMV	uPC78L15J
+18V	NJM78L18A	----------	uA78L18AMV	----------
+20V	NJM78L20A	----------	----------	AN78L20
+24V	NJM78L24A	----------	uA78L24AMV	----------

AN78L04	
uPC78L05J	AN78L05
AN78L06	
AN78L07	
uPC78L08J	AN78L08
----------	----------
AN78L09	
uPC78L10J	AN78L10
uPC78L12J	AN78L12
uPC78L15J	AN78L15
----------	AN78L18
----------	AN78L20
----------	AN78L24

S-805 ? ? (SEIKO I and D)
VOLTAGE DETECTOR



DETECTION RANGE(V)	S-805??
1.00 ~ 1.10	S-8051 ANB
1.10 ~ 1.20	S-8051 ANR
2.00 ~ 2.20	S-8052 ALB
2.20 ~ 2.40	S-8052 ALR
2.40 ~ 2.60	S-8052 ALO
2.60 ~ 2.80	S-8052 ALY
2.80 ~ 3.10	S-8053 ALB
2.90 ~ 3.10	S-8053 HLB
3.10 ~ 3.40	S-8053 ALR
3.25 ~ 3.405	S-8053 ALR-U
3.80 ~ 4.20	S-8054 HM
4.00 ~ 4.30	S-8054 ALB
4.30 ~ 4.60	S-8054 ALR
4.60 ~ 4.90	S-8054 ALO
4.90 ~ 5.20	S-8054 ALY

TC4020BF (TOSHIBA) FLAT PACKAGE
C-MOS 14-STAGE RIPPLE-CARRY BINARY COUNTER/DIVIDER
— TOP VIEW —

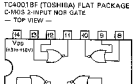
RD	Q13~Q0
1	ALL LOW
0	COUNT

COUNT	BINARY OUTPUTS													
	Q13	Q12	Q11	Q10	Q9	Q8	Q7	Q6	Q5	Q4	Q3	Q2	Q1	Q0
0	0000	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0001	0	0	0	0	0	0	0	0	0	0	0	0	1
2	0002	0	0	0	0	0	0	0	0	0	0	0	1	0
3	0003	0	0	0	0	0	0	0	0	0	0	0	1	1
4	0004	0	0	0	0	0	0	0	0	0	0	1	0	0
16380	3FFC	1	1	1	1	1	1	1	1	1	1	1	0	0
16381	3FFD	1	1	1	1	1	1	1	1	1	1	1	0	1
16382	3FFE	1	1	1	1	1	1	1	1	1	1	1	1	0
16383	3FFF	1	1	1	1	1	1	1	1	1	1	1	1	1

: BY HEXADECIMAL
: BY DECIMAL

0 ; LOW LEVEL
1 ; HIGH LEVEL

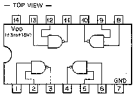
TC4001BF (TOSHIBA) FLAT PACKAGE
C-MOS 2-INPUT NOR GATE
— TOP VIEW —



A	B	Y
0	0	1
0	1	0
1	0	0
1	1	0

0 ; LOW LEVEL
1 ; HIGH LEVEL

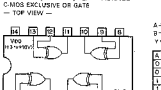
TC4011BF (TOSHIBA) FLAT PACKAGE
C-MOS 2-INPUT NAND GATE
— TOP VIEW —



A	B	Y
0	0	1
0	1	1
1	0	1
1	1	0

0 ; LOW LEVEL
1 ; HIGH LEVEL

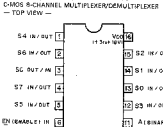
TC4030BF (TOSHIBA) FLAT PACKAGE
C-MOS EXCLUSIVE OR GATE
— TOP VIEW —

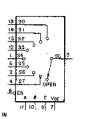


A	B	Y
0	0	0
0	1	1
1	0	1
1	1	0

0 ; LOW LEVEL
1 ; HIGH LEVEL

TC4051BF (TOSHIBA) FLAT PACKAGE
C-MOS 8-CHANNEL MULTIPLEXER/DEMULTIPLEXER
— TOP VIEW —

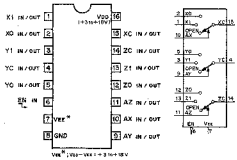




EN	C	B	A	"ON" CHANNEL
0	0	0	0	0
0	0	0	1	1
0	0	1	0	2
0	0	1	1	3
0	1	0	0	4
0	1	0	1	5
0	1	1	0	6
0	1	1	1	7
1	X	X	X	OPEN

0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE

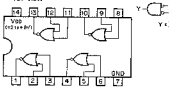
TC4053BF (TOSHIBA) FLAT PACKAGE
μPD4053BG (NEC) FLAT PACKAGE
C-MOS 2-CHANNEL MULTIPLEXER/DEMULTIPLEXER
— TOP VIEW —



CONT INPUTS			ON
EN	A	B	CHANNEL
0	0	0	C
0	1	1	A
1	X	X	OPEN

0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE.

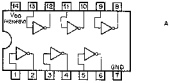
TC40H002F (TOSHIBA) FLAT PACKAGE
C-MOS 2-INPUT NOR GATE
— TOP VIEW —



A	B	Y
0	0	1
0	1	0
1	0	0
1	1	0

0 ; LOW LEVEL
1 ; HIGH LEVEL

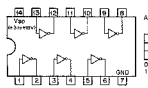
TC40H004F (TOSHIBA) FLAT PACKAGE
C-MOS INVERTER
— TOP VIEW —



A	Y
0	1
1	0

0 ; LOW LEVEL
1 ; HIGH LEVEL

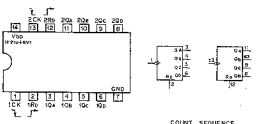
TC4069UBF (TOSHIBA) FLAT PACKAGE
C-MOS INVERTER
— TOP VIEW —



A	Y
0	1
1	0

0 ; LOW LEVEL
1 ; HIGH LEVEL

TC40H393F (TOSHIBA) FLAT PACKAGE
C-MOS 4-BIT BINARY COUNTER
— TOP VIEW —



COUNT SEQUENCE

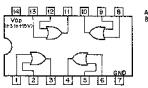
COUNT	Qd	Qc	Qb	Qa
0	0	0	0	0
1	0	0	0	1
2	0	0	1	0
3	0	0	1	1
4	0	1	0	0
5	0	1	0	1
6	0	1	1	0
7	0	1	1	1
8	1	0	0	0
9	1	0	0	1
10	1	0	1	0
11	1	0	1	1
12	1	1	0	0
13	1	1	0	1
14	1	1	1	0
15	1	1	1	1

RESET/ COUNT FUNCTION

Rb	Qa	Qc	Qb	Qd
1	0	0	0	0
0	COUNT			

0 ; LOW LEVEL
1 ; HIGH LEVEL

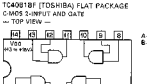
TC4071BF (TOSHIBA) FLAT PACKAGE
C-MOS 2-INPUT OR GATE
— TOP VIEW —



A	B	Y
0	0	0
0	1	1
1	0	1
1	1	1

0 ; LOW LEVEL
1 ; HIGH LEVEL

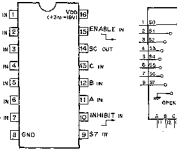
TC4081BF (TOSHIBA) FLAT PACKAGE
C-MOS 2-INPUT AND GATE
— TOP VIEW —



A	B	Y
0	0	0
0	1	0
1	0	0
1	1	1

0 ; LOW LEVEL
1 ; HIGH LEVEL

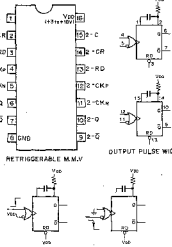
TC4512BF (TOSHIBA) FLAT PACKAGE
C-MOS 8-CHANNEL DATA SELECTOR/MULTIPLEXER
— TOP VIEW —



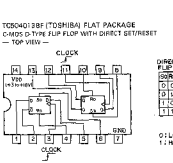
CONTROL INPUTS				OUTPUT
EN	INH	C	B	A	DC
0	0	0	0	0	S0
0	0	0	0	1	S1
0	0	0	1	0	S2
0	0	0	1	1	S3
0	0	1	0	0	S4
0	0	1	0	1	S5
0	0	1	1	0	S6
0	0	1	1	1	S7
0	1	X	X	X	GND
1	X	X	X	X	OPEN

0: LOW LEVEL
1: HIGH LEVEL
X: DON'T CARE

TC4543BF (TOSHIBA) FLAT PACKAGE
TC4528BF (TOSHIBA)
TC74HC4538F (TOSHIBA) FLAT PACKAGE
μPD4538BC (NEC)
C-MOS DUAL RETRIGGERABLE/NON-RETRIGGERABLE MONOSTABLE MULTIVIBRATOR
— TOP VIEW —



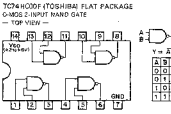
TC5040138F (TOSHIBA) FLAT PACKAGE
C-MOS D-TYPE FLIP FLOP WITH DIRECT SET/RESET
— TOP VIEW —



DIRECT R-S FLIP FLOP			D-TYPE FLIP FLOP	
SD	RD	D	CK	Q	Q
0	0	X	X	H	H
0	1	0	↑	L	H
1	0	1	↑	H	L
1	1	0	↓		

CLOCK CK: ↑
CK=↑: BEFORE CLOCK
CK=↓: AFTER CLOCK
0: LOW LEVEL
1: HIGH LEVEL

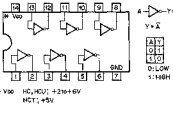
TC74HC00F (TOSHIBA) FLAT PACKAGE
C-MOS 2-INPUT NAND GATE
— TOP VIEW —



A	B	Y
0	0	1
0	1	1
1	0	1
1	1	0

0: LOW LEVEL
1: HIGH LEVEL

TC74HC04F (TOSHIBA) FLAT PACKAGE
C-MOS INVERTER
— TOP VIEW —

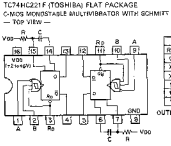


A	Y
0	1
1	0

0: LOW LEVEL
1: HIGH LEVEL

* VDD HC, HCU: +2.0~+6V
HCT: +5V

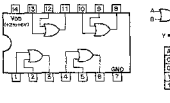
TC74HC221F (TOSHIBA) FLAT PACKAGE
C-MOS MONOSTABLE MULTIVIBRATOR WITH SCHMITT TRIGGER INPUT
— TOP VIEW —



INPUTS			OUTPUTS	
Rd	A	B	Q	Q
0	X	X	0	1
X	1	X	0	1
X	X	0	0	1
1	0	↑	⌐	⌐
1	↓	1	⌐	⌐
1	0	↓	⌐	⌐

0: LOW LEVEL
1: HIGH LEVEL
X: DON'T CARE
OUTPUT PULSE WIDTH = 0.7CR

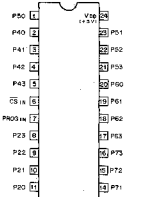
TC74HC32F (TOSHIBA) FLAT PACKAGE
C-MOS 2-INPUT OR GATE
— TOP VIEW —



A	B	Y
0	0	0
0	1	1
1	0	1
1	1	1

0: LOW LEVEL
1: HIGH LEVEL

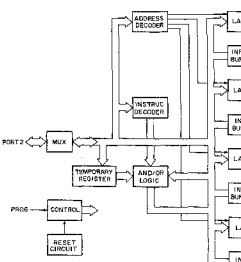
μPD8243G (NEC) FLAT PACKAGE
C-MOS I/O PORT EXPANDER
— TOP VIEW —



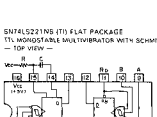
CONTROL AND PORT ADDRESSING

P23	P22	P21	P20	PORT	CONTROL
0	0	0	0	4	READ
0	0	0	1	5	
0	0	1	0	6	
0	0	1	1	7	
0	1	0	0	4	WRITE
0	1	0	1	5	
0	1	1	0	6	
0	1	1	1	7	
1	0	0	0	4	OR
1	0	0	1	5	
1	0	1	0	6	
1	0	1	1	7	
1	1	0	0	4	AND
1	1	0	1	5	
1	1	1	0	6	
1	1	1	1	7	

PROG ; PROGRAM PULSE INPUT
CS ; CHIP SELECT INPUT
P20~P23 ; I/O PORT 2 (FOR CPU)
P40~P43 ; I/O PORT 4
P50~P53 ; I/O PORT 5
P60~P63 ; I/O PORT 6
P70~P73 ; I/O PORT 7



SN74LS221NS (TI) FLAT PACKAGE
TTL MONOSTABLE MULTIVIBRATOR WITH SCHMITT TRIGGER INPUT
— TOP VIEW —

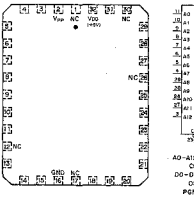


INPUTS			OUTPUTS	
Rg	A	B	Q	Q
0	X	X	0	1
X	L	X	0	1
X	X	H	0	1
1	H	↓	⊓	⊔
1	↓	H	⊓	⊔
1	0	↑	⊓	⊔

0;LOW LEVEL
1;HIGH LEVEL
X;DON'T CARE

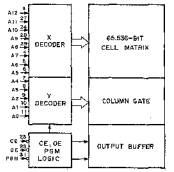
OUTPUT PULSE WIDTH = 0.7CR

M5M27C64-30CV (FUJITSU) (ACCESS TIME = 300NS)
C-MOS 64K(8K×8) ERASABLE PROM
— TOP VIEW —



A0~A12 ; ADDRESS INPUTS
CE ; CHIP ENABLE
D0~D7 ; DATA OUTPUTS
OE ; OUTPUT ENABLE
PGM; PROGRAM ENABLE
VPP ; PROGRAM VOLTAGE

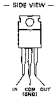
NO	IN	OUT	SYMBOL	NO	IN	OUT	SYMBOL	NO	IN	OUT	SYMBOL	NO	IN	OUT	SYMBOL
1			NC	9		O	A2	17			NC	25		O	O5
2			VPP	10		O	A1	18			D3	26			NC
3		O	A12	11		O	A0	19			D4	27		O	A11
4		O	A7	12			NC	20			D5	28		O	A9
5		O	A6	13		O	D0	21			D6	29		O	A8
6		O	A5	14		O	D1	22			D7	30			NC
7		O	A4	15		O	D2	23		O	CE	31		O	PGM
8		O	A3	16			GND	24		O	A10	32			VDD



An	CE	OE	PGM	Vpp	Dn	FUNCTION
An	O	O	1	+5V	D OUT	READ
An	O	1	1	+5V	Hi-Z	OUTPUT DISABLE
An	O	O	O	+5V	Hi-Z	OUTPUT DISABLE
X	1	X	X	+5V	Hi-Z	STANDBY
An	O	1	O	+12V	D IN	PGM
An	O	O	1	+12V	D OUT	PGM VERIFY
X	1	X	X	+12V	Hi-Z	PGM INHIBIT

0;LOW LEVEL
1;HIGH LEVEL
X;DON'T CARE
Hi-Z;HIGH IMPEDANCE

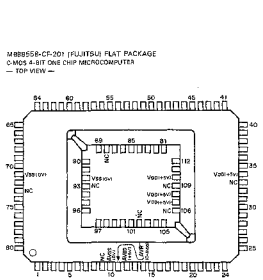
NJM78 ? A (JRC)
POSITIVE VOLTAGE REGULATOR (1A)
— SIDE VIEW —

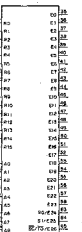


OUTPUT VOLTAGE	NJM78?? PS78?? HA17827P L78?? NJM78?2A NJM7872A/E
+5V	NJM7805 PS7805 HA17805P LT605 -------- NJM7805A/E
+6V	NJM7806 ------ HA17806P ------ -------- NJM7806A/E
+7V	NJM7807 ------ HA17807P LT607 -------- ----------
+8V	NJM7808 ------ HA17808P ------ -------- NJM7808A/E
+8.5V	------- ------ --------- ------ -------- ----------
+9V	NJM7809 ------ --------- ------ -------- NJM7809A/E
+10V	NJM7810 ------ --------- ------ -------- ----------
+12V	NJM7812 PS7812 HA17812P ------ -------- NJM7812A/E
+15V	NJM7815 PS7815 HA17815P ------ -------- NJM7815A/E
+18V	NJM7818 ------ HA17818P ------ -------- NJM7818A/E
+20V	NJM7820 ------ --------- ------ -------- NJM7820A/E
+24V	NJM7824 PS7824 HA17824P ------ -------- NJM7824A/E

OUTPUT VOLTAGE	uA7??UC uPC1437H uPC787?H TA7277?/AP
+5V	uA7805UC uPC1430H uPC7805H TA78005P/AP
+6V	uA7806UC ---------- ---------- TA78006P/AP
+7V	uA7807UC ---------- ---------- ----------
+8V	uA7808UC uPC1430H uPC7808H TA78008P/AP
+8.5V	uA7885UC ---------- ---------- TA78009P/AP
+9V	---------- ---------- ---------- ----------
+10V	---------- ---------- ---------- TA78010P/AP
+12V	uA7812UC uPC1431H uPC7812H TA78012P/AP
+15V	uA7815UC uPC1431H uPC7815H TA78015P/AP
+18V	uA7818UC uPC1431H uPC7818H TA78018P/AP
+20V	---------- ---------- ---------- TA78020P/AP
+24V	uA7824UC uPC1432H uPC7824H TA78024P/AP

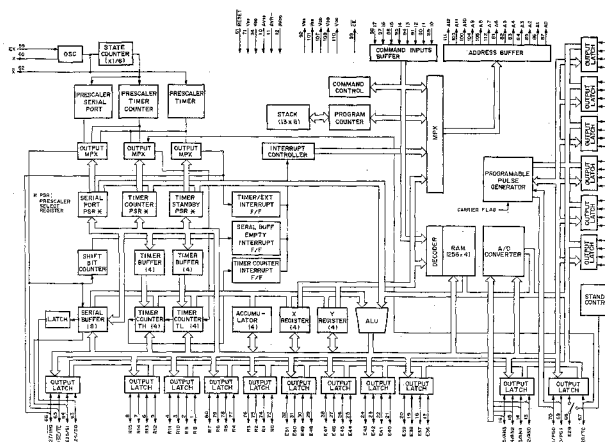
MB88558-CF-201 (FUJITSU) FLAT PACKAGE
C-MOS 4-BIT ONE CHIP MICROCOMPUTER
— TOP VIEW —





PIN NO.	IN	OUT	SYMBOL	PIN NO.	IN	OUT	SYMBOL	PIN NO.	IN	OUT	SYMBOL	PIN NO.	IN	OUT	SYMBOL
1	○	○	R8	26	○	○	E45	51	○	○	E76	76	○	○	R3
2	○	○	R9	27	○	○	E46	52	○	○	E17	77	○	○	R4
3	○	○	R10	28	○	○	E47	53	○	○	E18	78	○	○	R5
4	○	○	R11	29	○	○	E48	54	○	○	E19	79	○	○	R6
5	○	○	R12	30	○	○	E49	55	○	○	E20	80	○	○	R7
6	○	○	R13	31	○	○	E50	56	○	○	E21	81	○	○	A6
7	○	○	R14	32	○	○	E51	57	○	○	E22	82	○	○	A5
8	○	○	R15	33	→	—	———	58	○	○	E23	83	○	○	A4
9	—	—	———	34	—	—	———	59	○	○	EX	84	○	○	A3
10	—	—	AVss	35	○	○	E0	60	←	○	X	85	○	○	A2
11	—	—	AVR⁻	36	○	○	E1	61	○	○	RESET	86	○	○	A1
12	—	—	AVRH	37	○	○	E2	62	←	○	Z	87	○	○	A0
13	○	○	E32/ANO	38	○	○	E3	63	○	○	E24/SO	88	—	—	———
14	○	○	E33/AN1	39	○	○	E4	64	○	○	E25/SI	89	○	○	I0
15	○	○	E34/AN2	40	○	○	E5	65	○	○	E26/SC/TO	90	○	○	I1
16	○	○	E35/AN3	41	○	○	E6	66	○	○	E27/RQ	91	○	○	I2
17	○	○	E36	42	○	○	E7	67	○	○	E28/TE	92	—	—	Vss
18	○	○	E37	43	○	○	E8	68	○	○	E29	93	→	—	———
19	○	○	E38	44	○	○	E9	69	○	○	E30/CP1	94	○	○	I3
20	○	○	E39	45	○	○	E10	70	○	○	E31/CP2	95	○	○	I4
21	○	○	E40	46	○	○	E11	71	—	—	Vss(GV)	96	○	○	I5
22	○	○	E41	47	○	○	E12	72	○	○	R0	97	○	○	I6
23	○	○	E42	48	○	○	E13	73	→	—	———	98	○	○	I7
24	○	○	E43	49	○	○	E14	74	○	○	R1	99	←	○	CE
25	○	○	E44	50	○	○	E15	75	○	○	R2	100	○	○	A10

A0–A12	; ADDRESS OUTPUTS
AN0–AN3	; ANALOG SIGNAL INPUTS
CE	; CHIP ENABLE
E0–E51	; I/O PORT (E PORT) INPUTS/OUTPUTS
EX	; EXTERNAL CLOCK INPUT
I0–I7	; COMMAND INPUTS
IRQ	; EXTERNAL INTERRUPT REQUEST INPUT
PGI	; PROGRAMABLE PULSE GENERATOR TRIGGER INPUT
PGO	; PROGRAMABLE PULSE GENERATOR OUTPUT
R0–R15	; I/O PORT (R PORT) INPUTS/OUTPUTS
SC/TO	; SHIFT CLOCK INPUT/OUTPUT /TIMING OUTPUTS
SI	; SERIAL DATA INPUT
SO	; SERIAL DATA OUTPUT
TC	; COUNT CLOCK INPUT
X	; CLOCK OUTPUT



TRANSISTOR

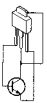
TOP VIEW (SCALE 4/1) 2SA1163 2SA1226 2SB812 2SB624 , BV4

TOP VIEW (SCALE 4/1) 2SB1115A

2SB733

2SC1623
2SC2235
2SC2712
2SC3112-G
2SC3326
2SC3356R
2SD1628
2SD596

2SC3624-K



2SD1164

2SD773

2SD786

TOP VIEW (SCALE 4/1) 2SK358-G
2SK359
2SK94

TOP VIEW (SCALE 4/1) DTA144EK (R1=47K, R2=47K)

TOP VIEW (SCALE 4/1) DTC144EK (R1=47K, R2=47K)
DTC144WK (R1=47K, R2=22K)

DIODE

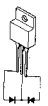
1GE-9
1S3119

TOP VIEW (SCALE 4/1) 1S2836
MA151WA

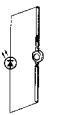
TOP VIEW (SCALE 4/1) 1S2837
MA151WK

TOP VIEW (SCALE 4/1) 1S3123
MA153

ERB81-004



ESAC33-02CS



GL-1HD1 : RED

RD : TE9 ,
RD : ME ,
RD : TE9B ,

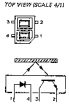
SBD1-05CP

RADIATION SIDE SLH-344T3 : RED
SLH-344T3 , YELLOW

TLR124 , RED
TLUR164 , RED

OTHERS

GP-1104



TOP VIEW SCALE 4/1

GP-2324

SECTION 14
SCHEMATIC DIAGRAMS

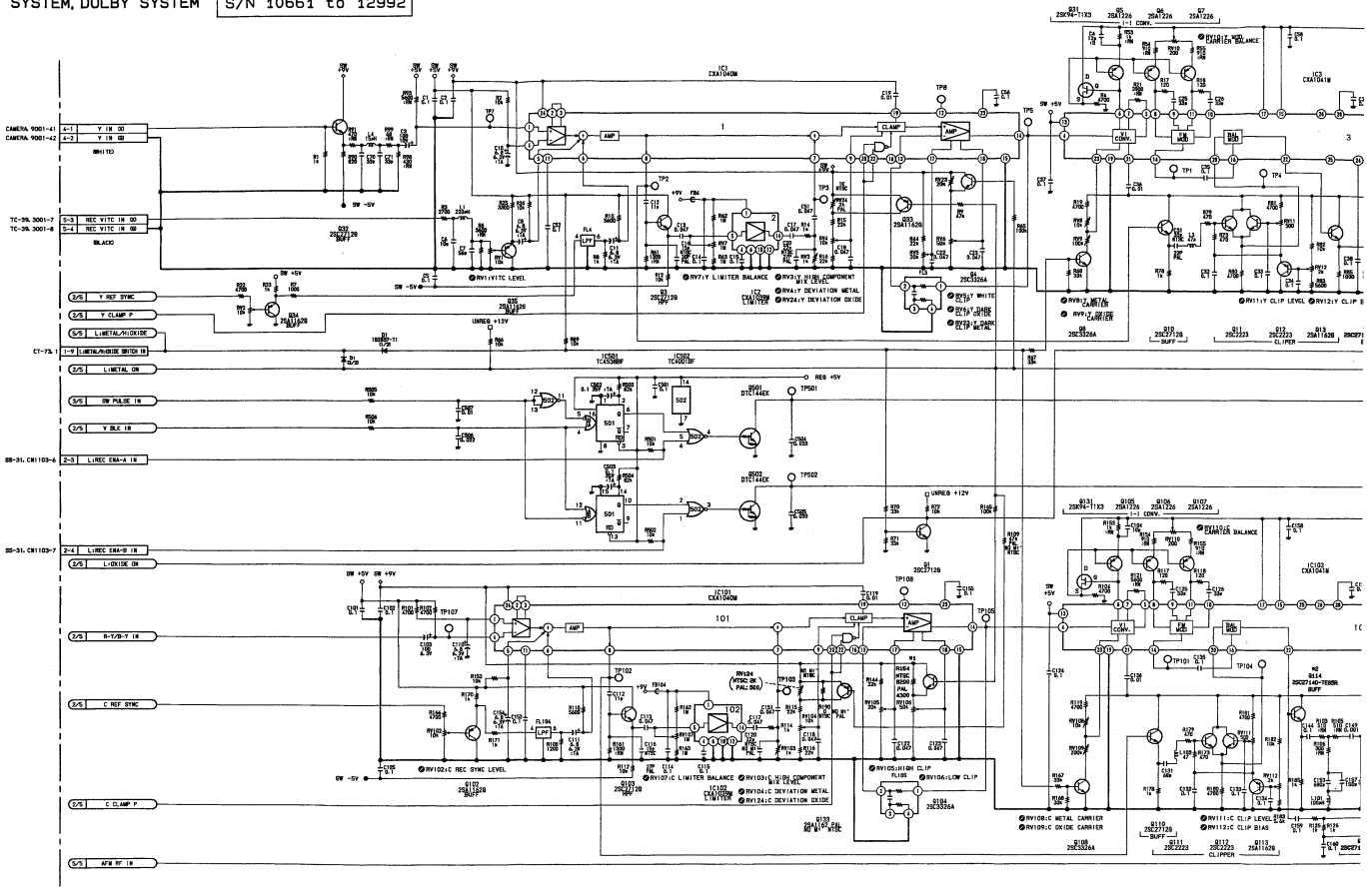
CIRCUIT FUNCTION OF THE SCHEMATIC DIAGRAMS

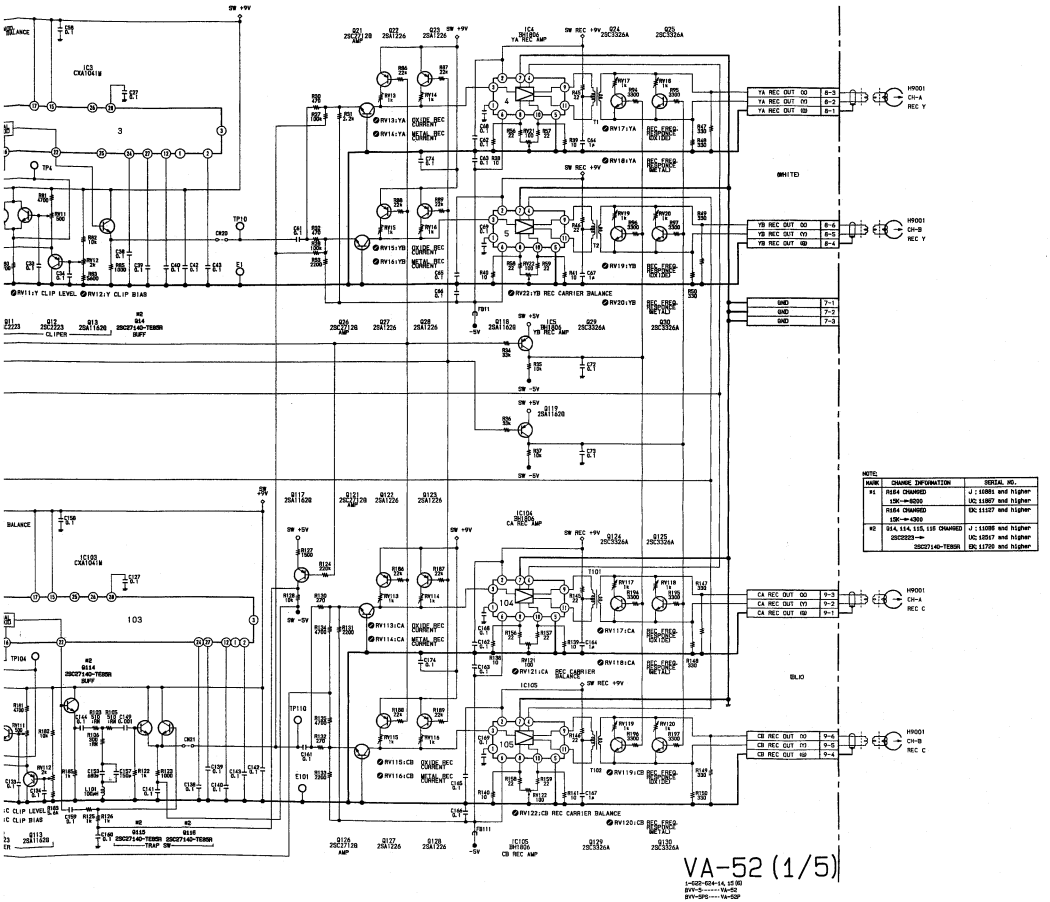
The circuit information is provided below.

SYSTEM	CIRCUIT BOARD	CIRCUIT FUNCTION
VIDEO	VA-52P	• Video System
AUDIO	VA-52P	• AFM System, Dolby Process
	TC-39P	• Audio Amplifier
	AU-72P	• Audio REC Amplifier
	CT-85	• Audio Level Control
	HP-34	• Earphone Jack
	PA-53	• CONFI./PB Amplifier
TIME CODE	TC-39P	• Time Code Generator/Reader
SERVO	SS-31P	• Servo System
	DD-5P	• Drum Motor Driver
SYSTEM CONTROL	PTC-11	• Supply/Take-up Reel Rotation Detector
	RM-49	• Reel Motor Driver
	CM-20	• Eject Motor
	DR-48	• Pinch/Brake Solenoids and Threading Motor Driver
	SS-31P DUS-296	• System Control
	KY-94	• Function Key/Display
	CT-73	• Metal/Oxide Selector
	SE-30	• Mechanical Function Control Sensor
	SE-60	• Tension Regulator Release
	SW-192	• REC Inhibit Switch for Metal
	SW-200	• Cassette-up Compartment Lock/Unthreading end Switch
	SW-201	• Cassette-in Switch/REC Inhibit Switch for Oxide
POWER SUPPLY	CN-121	• DC Input Relay
	DC-27	• External DC Backup
	DD-10	• Phantom DC-DC Converter (For UC, EK)
	DUS-182	• Ripple Filter
	SW-131	• Breaker
	SW-223	• Phantom On/Off Switch (For UC, EK)
OTHERS	CN-142	• 50 Pin/Flexible Board
	FL-38	• Flexible Harness Board
	PA-67	• REC/PB Amplifier

SP-00550/ Druck 19

VA-52P (1/5) ; VIDEO SYSTEM
AFM SYSTEM, DOLBY SYSTEM S/N 10661 to 12992





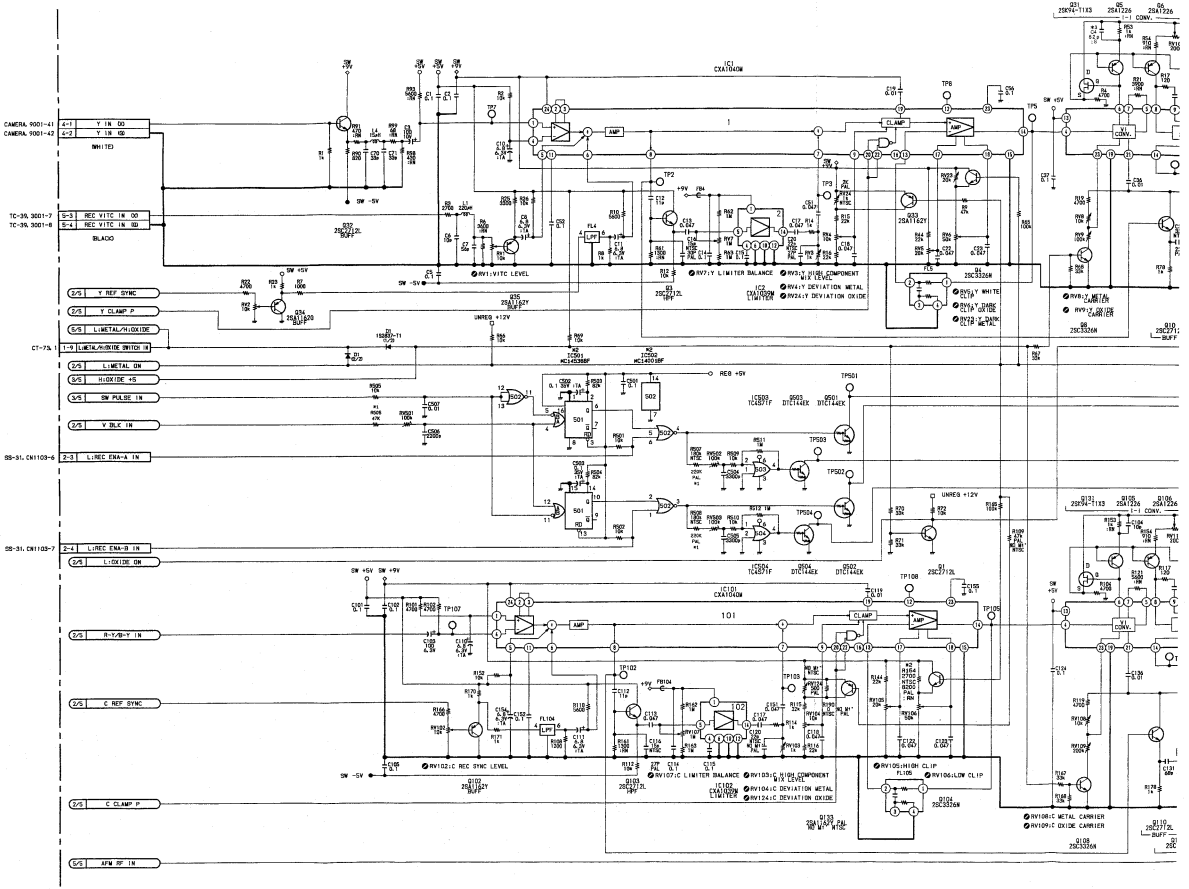
MARK	CHANGE INFORMATION	SERIAL NO.
#1	R164 CHANGED 15K→→820Ω	J : 10881 and higher UC: 11807 and higher
	R164 CHANGED 15K→→430Ω	UC: 11127 and higher
#2	R14,114,115,116 CHANGED 2SC2223→→ 2SC2714Q-TE85R	J : 11098 and higher UC: 12547 and higher EK: 11720 and higher

14-7 (a) 14-8 (a)

I J K L M N O P

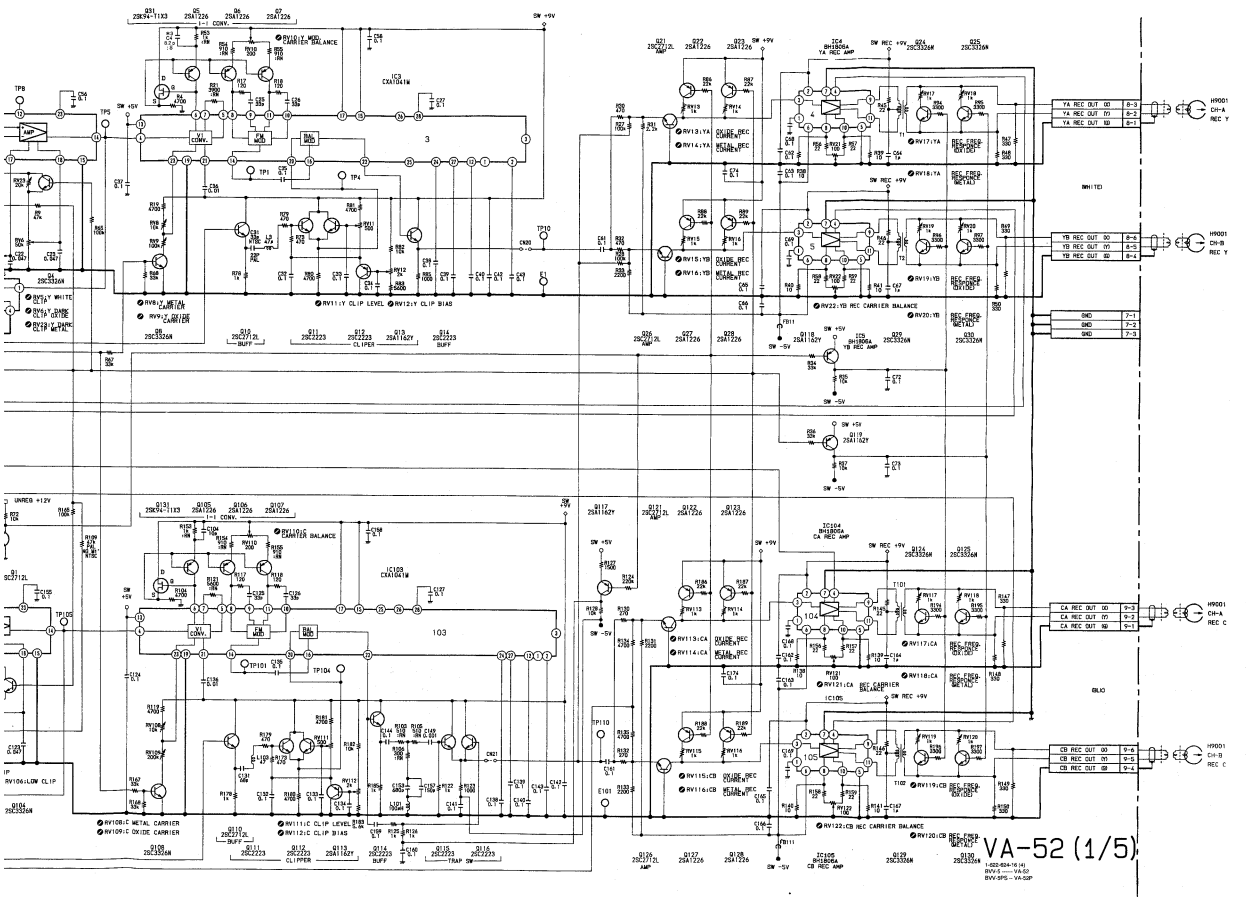
VA-52P (1/5) ; VIDEO SYSTEM
AFM SYSTEM, DOLBY SYSTEM

S/N 12993 and higher

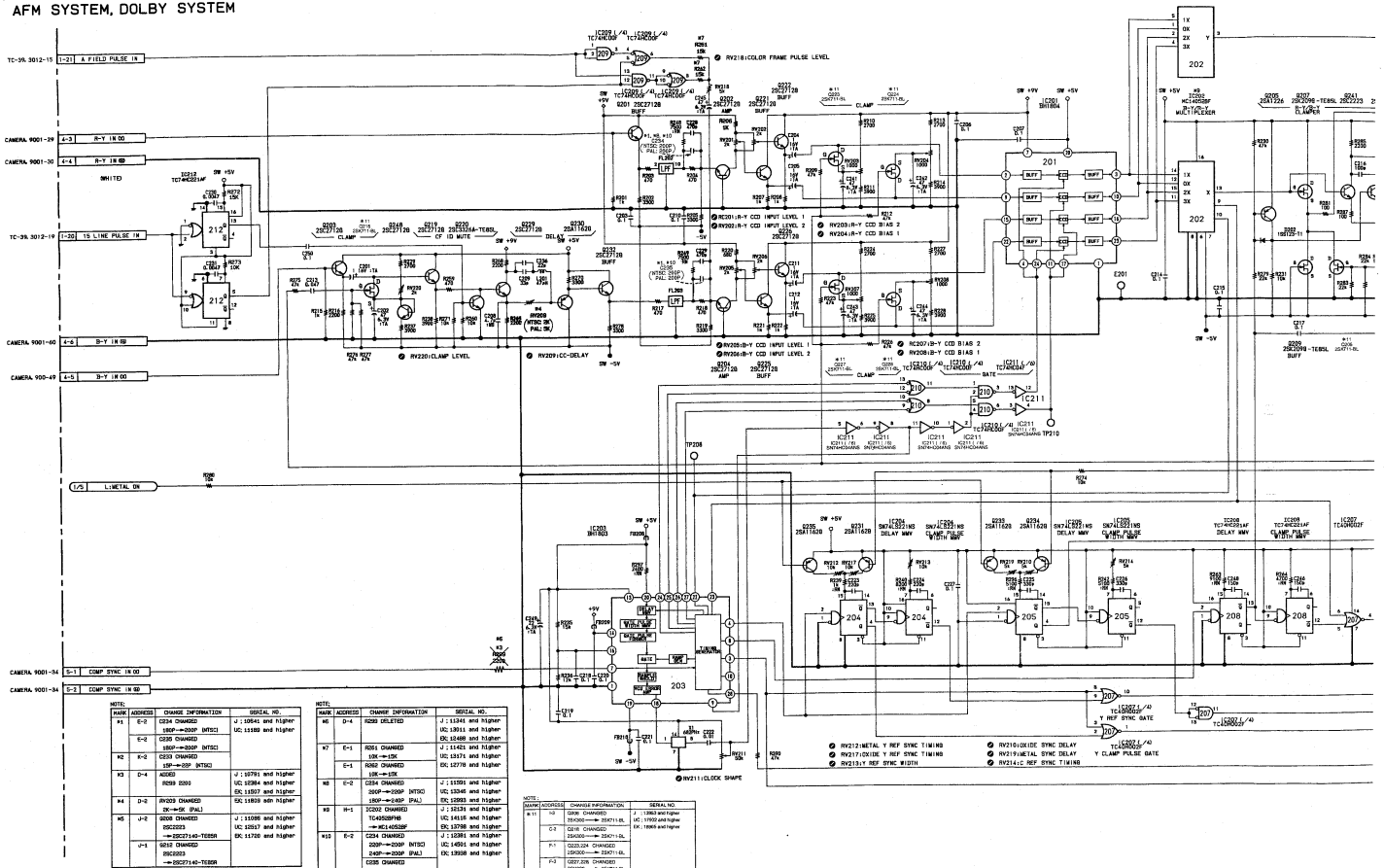


NOTE	MARK	ADDRESS	CHANGE INFORMATION	SERIAL NO.
	※1	C-3	R508 CHANGED 100K→47K	J ; 11591 and higher UC; 13346 and higher EK; 12993 and higher
		F-3	R507 CHANGED 270K→220K (PAL)	EK; 13993 and higher
		F-4	R508 CHANGED 270K→220K (PAL)	
	※2	H-5	R164 CHANGED 430Ω→270Ω (NTSC)	J ; 11951 and higher UC; 13781 and higher
		F-3	IC563 CHANGED TC4538BF→MC14538BF	J ; 11231 and higher UC; 14115 and higher
		F-3	IC552 CHANGED TC4013BF→MC14013BF	EK; 13798 and higher

NOTE	MARK	ADDRESS	CHANGE INFORMATION	SERIAL NO.
	※3	I-1	C4 CHANGED 10 μ → 4.8 μ	J ; 13803 and higher UC ; 17552 and higher EK ; 16083 and higher


VA-52 (1/5)
14-7 (b)
14-8 (b)
H
I
J
K
L
M
N
O

VA-52P (2/5) : VIDEO SYSTEM
AFM SYSTEM, DOLBY SYSTEM


TC-39.3012-15 1-21 A FIELD PULSE IN
CAMERA 9001-29 4-3 R-Y IN 00
CAMERA 9001-30 4-4 R-Y IN 60
TC-39.3012-19 1-20 1S LINE PULSE IN
CAMERA 9001-60 4-6 B-Y IN 60
CAMERA 900-49 4-5 B-Y IN 00
1/S L:METAL ON
CAMERA 9001-34 5-1 COMP SYNC IN 00
CAMERA 9001-34 5-2 COMP SYNC IN 60
WHITE
RV218:COLOR FRAME PULSE LEVEL
RV220:CLAMP LEVEL
RV209:CC-DELAY
RV201:R-Y CCD INPUT LEVEL 1
RV202:R-Y CCD INPUT LEVEL 2
RV203:R-Y CCD BIAS 2
RV204:R-Y CCD BIAS 1
RV205:B-Y CCD INPUT LEVEL 1
RV206:B-Y CCD INPUT LEVEL 2
RC207:B-Y CCD BIAS 2
RV208:B-Y CCD BIAS 1
RV212:METAL Y REF SYNC TIMING
RV217:OXIDE Y REF SYNC TIMING
RV213:Y REF SYNC WIDTH
RV210:OXIDE SYNC DELAY
RV219:METAL SYNC DELAY
RV214:C REF SYNC TIMING
RV211:CLOCK SHAPE
Y REF SYNC GATE
Y CLAMP PULSE GATE
14-12
14-13

NOTE:

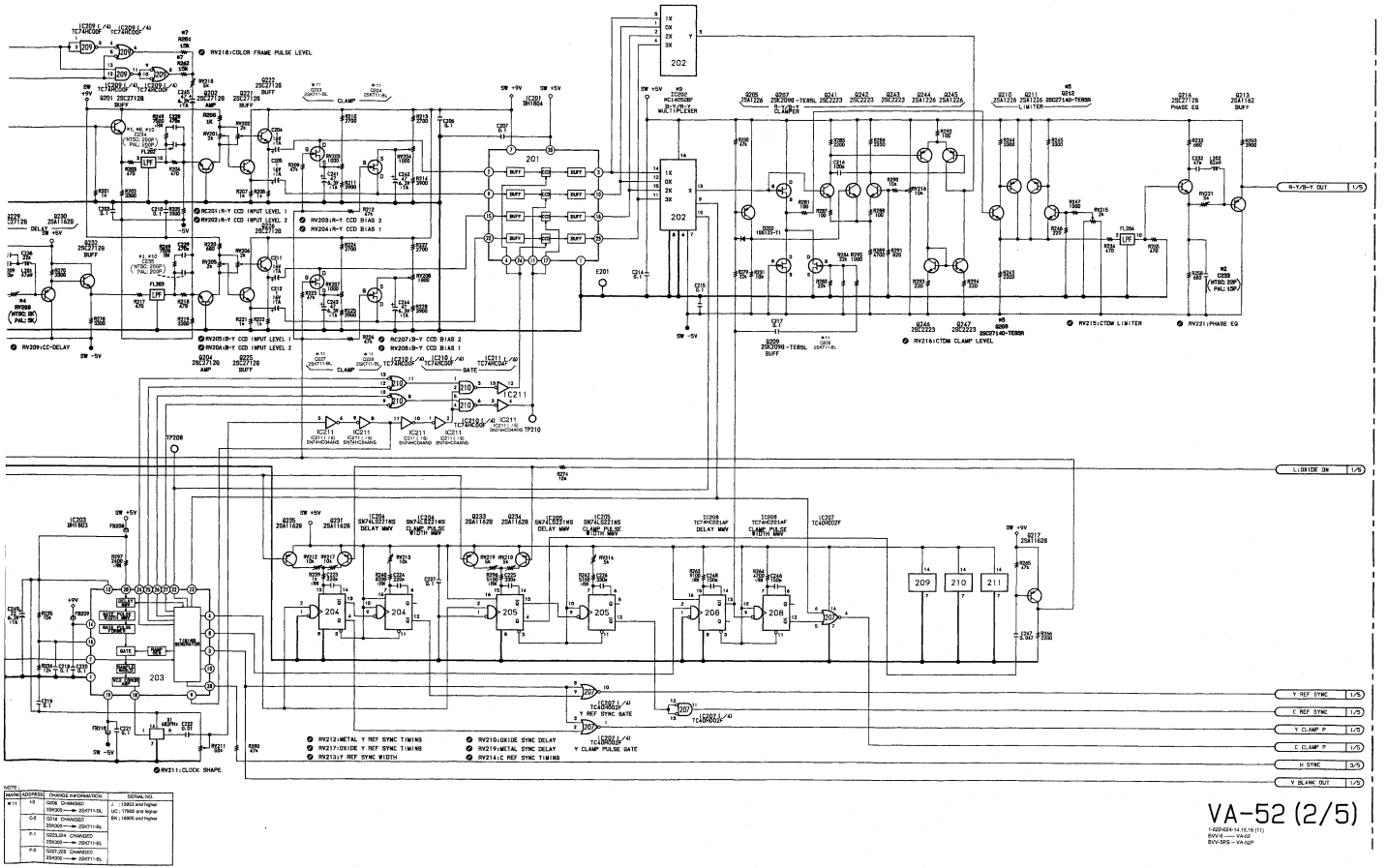
MARK	ADDRESS	CHANGE INFORMATION	SERIAL NO.
#1	E-2	C234 CHANGED 180P→200P (NTSC)	J ; 10541 and higher UC; 11182 and higher
	E-2	C235 CHANGED 180P→200P (NTSC)	
#2	K-2	C253 CHANGED 15P→22P (NTSC)	
#3	D-4	ADDED R259 220Ω	J ; 10791 and higher UC; 12364 and higher EK; 11527 and higher
#4	D-2	RV203 CHANGED 2K→5K (PAL)	EK; 11839 adn higher
#5	J-2	Q208 CHANGED 2SC2223 →2SC2712-T6TSR	J ; 11086 and higher UC; 12617 and higher EK; 11720 and higher
	J-1	Q212 CHANGED 2SC2223 →2SC2712-T6TSR	

NOTE:

MARK	ADDRESS	CHANGE INFORMATION	SERIAL NO.
#6	D-4	R259 DELETED	J ; 11341 and higher UC; 13011 and higher EK; 12488 and higher
#7	E-1	R261 CHANGED 10K→12K	J ; 11431 and higher UC; 13171 and higher EK; 12778 and higher
	E-1	R262 CHANGED 10K→12K	
#8	E-2	C234 CHANGED 200P→220P (NTSC) 180P→240P (PAL)	J ; 11591 and higher UC; 13345 and higher EK; 12893 and higher
#9	H-1	IC202 CHANGED TC4052BFNB →MC14052BF	J ; 12133 and higher UC; 14116 and higher EK; 13738 and higher
#10	E-2	C234 CHANGED 220P→200P (NTSC) 240P→220P (PAL)	J ; 12381 and higher UC; 14501 and higher EK; 13938 and higher
		C235 CHANGED 180P→200P (PAL)	

NOTE:

MARK	ADDRESS	CHANGE INFORMATION	SERIAL NO.
#11	I-3	Q206 CHANGED 2SA1020→2SA1213-BL	J ; 13963 and higher UC ; 17502 and higher EK ; 16965 and higher
	C-2	Q216 CHANGED 2SA1020→2SA1213-BL	
	F-1	Q223,224 CHANGED 2SK302→2SA1213-BL	
	F-3	Q227,228 CHANGED 2SK302→2SA1213-BL	



MARK	ADDRESS	CHANGE INFORMATION	SERIAL NO.
★11	I-3	Q256 CHANGED: 5SK300 ⟶ 2SA1211-BL	J ; 13902 and higher UC ; 17900 and higher BK ; 18900 and higher
	C-2	Q218 CHANGED: 2SK600 ⟶ 2SA1211-BL	
	F-1	Q233,234 CHANGED: 2SK300 ⟶ 2SA1211-BL	
	F-3	Q237,325 CHANGED: 2SK600 ⟶ 2SA1211-BL	

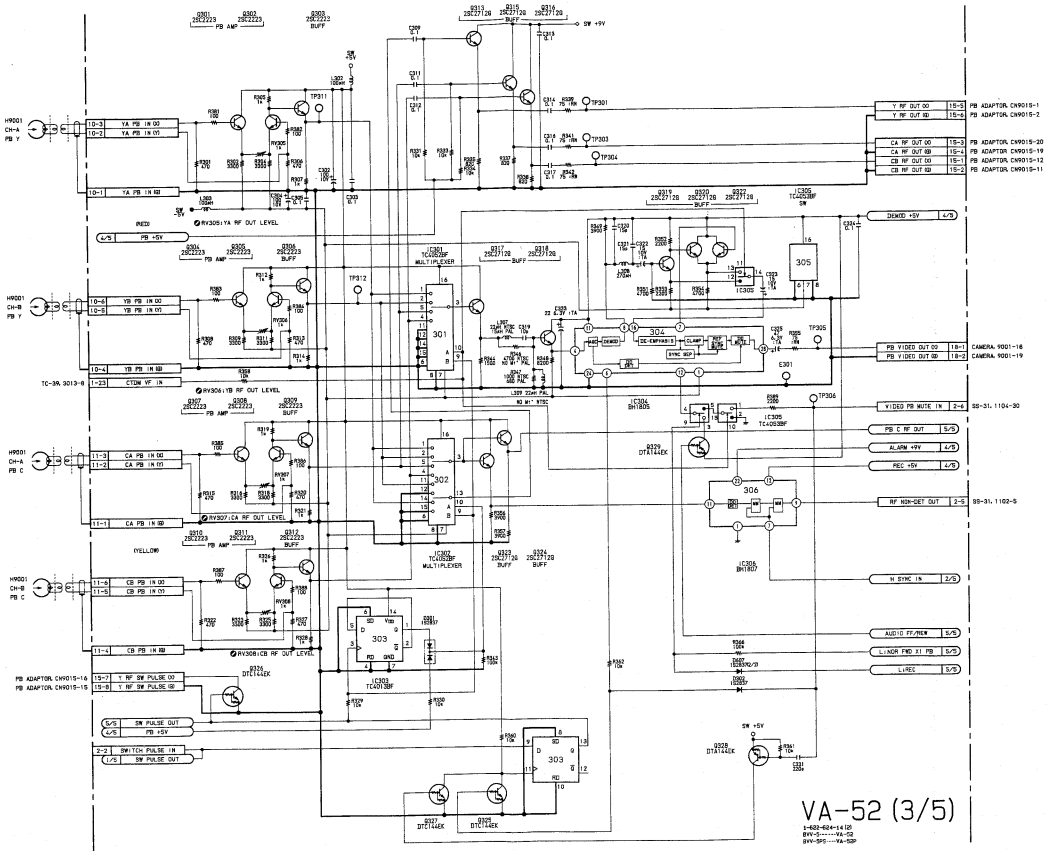
NOTE :

14-13 14-14

E F G H I J K L

VA-52P (3/5) ; VIDEO SYSTEM
AFM SYSTEM, DOLBY PROCESS

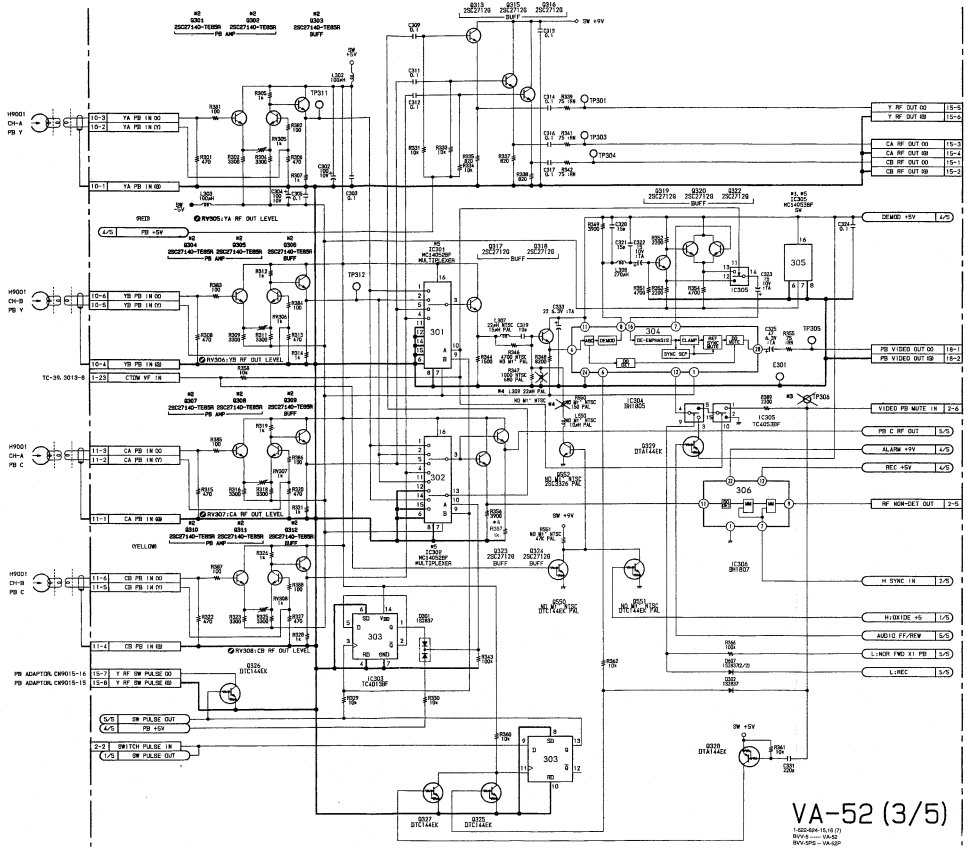
S/N 10661 to 10880



14-17 (a)

14-18 (a)

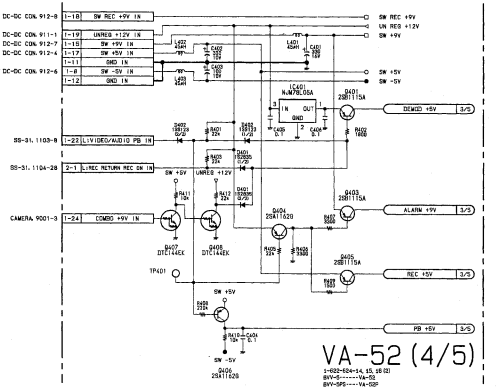
VA-52P (3/5) ; VIDEO SYSTEM
AFM SYSTEM, DOLBY PROCESS **S/N 10881 and higher**



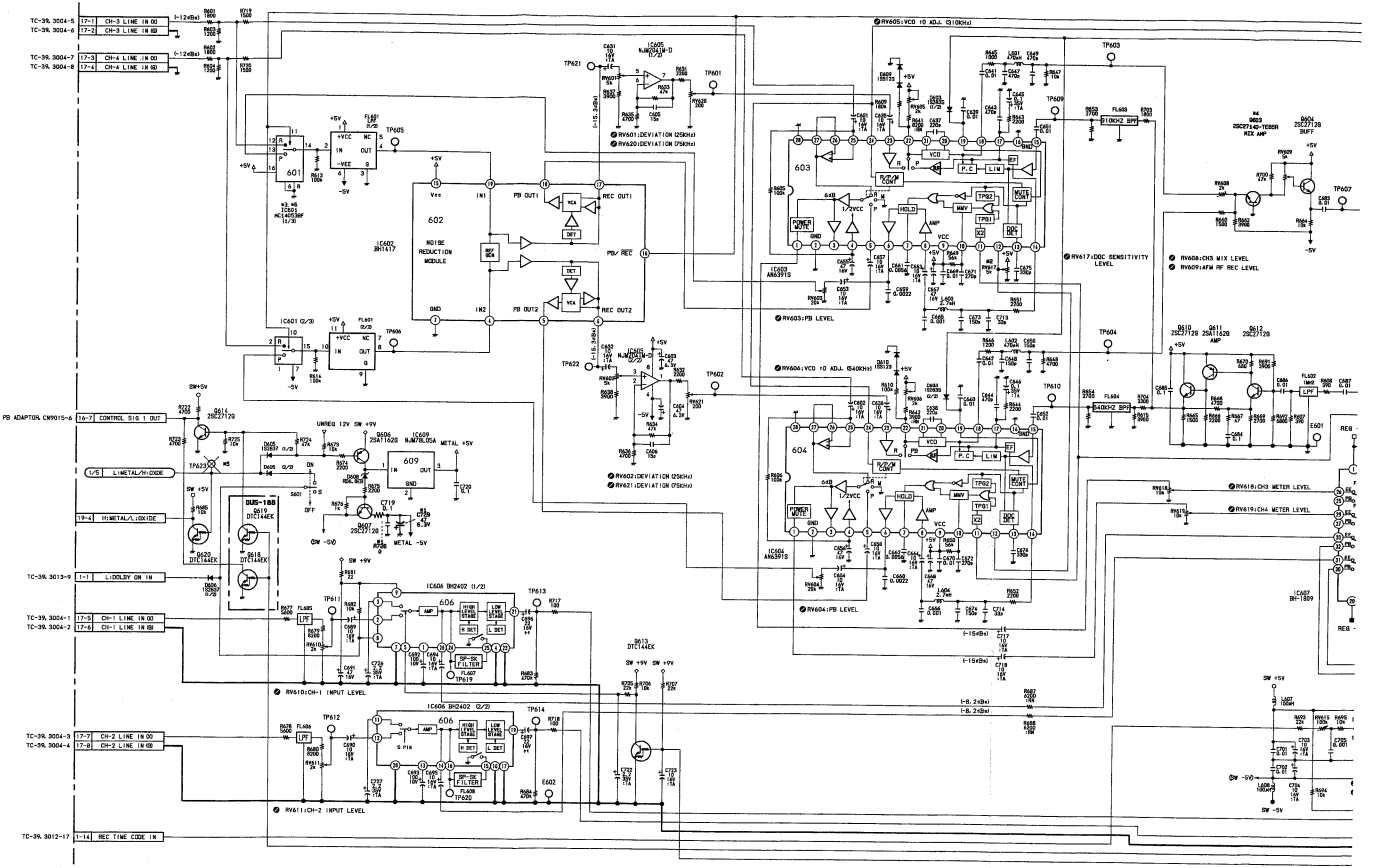
NOTE:			
MARK	ADDRESS	CHANGE INFORMATION	SERIAL NO.
★1	D-2	IC305 CHANGED TC40538F→TC40539FNB	J : 11186 and higher UC: 12542 and higher
★2	D-1	Q301 CHANGED 2SC2223 →2SC2140-TE85R	J : 11186 and higher UC: 12517 and higher
	D-1	Q302 CHANGED 2SC2223 →2SC2140-TE85R	
	D-1	Q303 CHANGED 2SC2223 →2SC2140-TE85R	
	D-2	Q304 CHANGED 2SC2223 →2SC2140-TE85R	
	D-2	Q305 CHANGED 2SC2223 →2SC2140-TE85R	
	D-2	Q306 CHANGED 2SC2223 →2SC2140-TE85R	
	D-3	Q307 CHANGED 2SC2223 →2SC2140-TE85R	
	D-3	Q308 CHANGED 2SC2223 →2SC2140-TE85R	
	D-3	Q309 CHANGED 2SC2223 →2SC2140-TE85R	
	D-4	Q310 CHANGED 2SC2223 →2SC2140-TE85R	
	D-4	Q311 CHANGED 2SC2223 →2SC2140-TE85R	
	D-4	Q312 CHANGED 2SC2223 →2SC2140-TE85R	
★3	D-3	TP308 DELETED	J : 11511 and higher UC: 13202 and higher EK: 12663 and higher
★4	E-3	R550 DELETED	EK: 12663 and higher
	E-3	L309 DELETED	
★5	E-2	IC301 CHANGED TC40539F→MC14052BF	J : 12131 and higher UC: 14119 and higher
	E-4	IC302 CHANGED TC40539F→MC14052BF	EK: 13799 and higher
	D-2	IC305 CHANGED TC40538F→MC14053BF	

NOTE:			
MARK	ADDRESS	CHANGE INFORMATION	SERIAL NO.
★6	E-4	R327 CHANGED 300Ω →0Ω	J : 12833 and higher UC : 17582 and higher EK : 18335 and higher

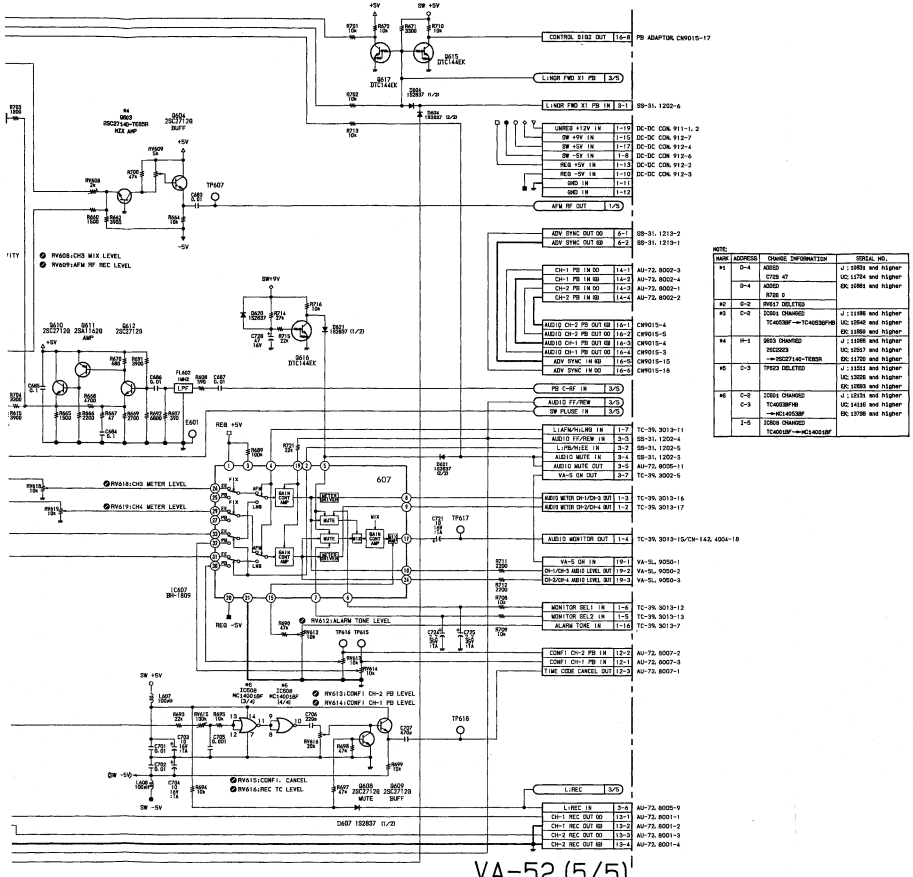
VA-52P (4/5) ; VIDEO SYSTEM
AFM SYSTEM, DOLBY PROCESS



VA-52P (5/5) ; VIDEO SYSTEM
AFM SYSTEM, DOLBY PROCESS



14-25 14-26

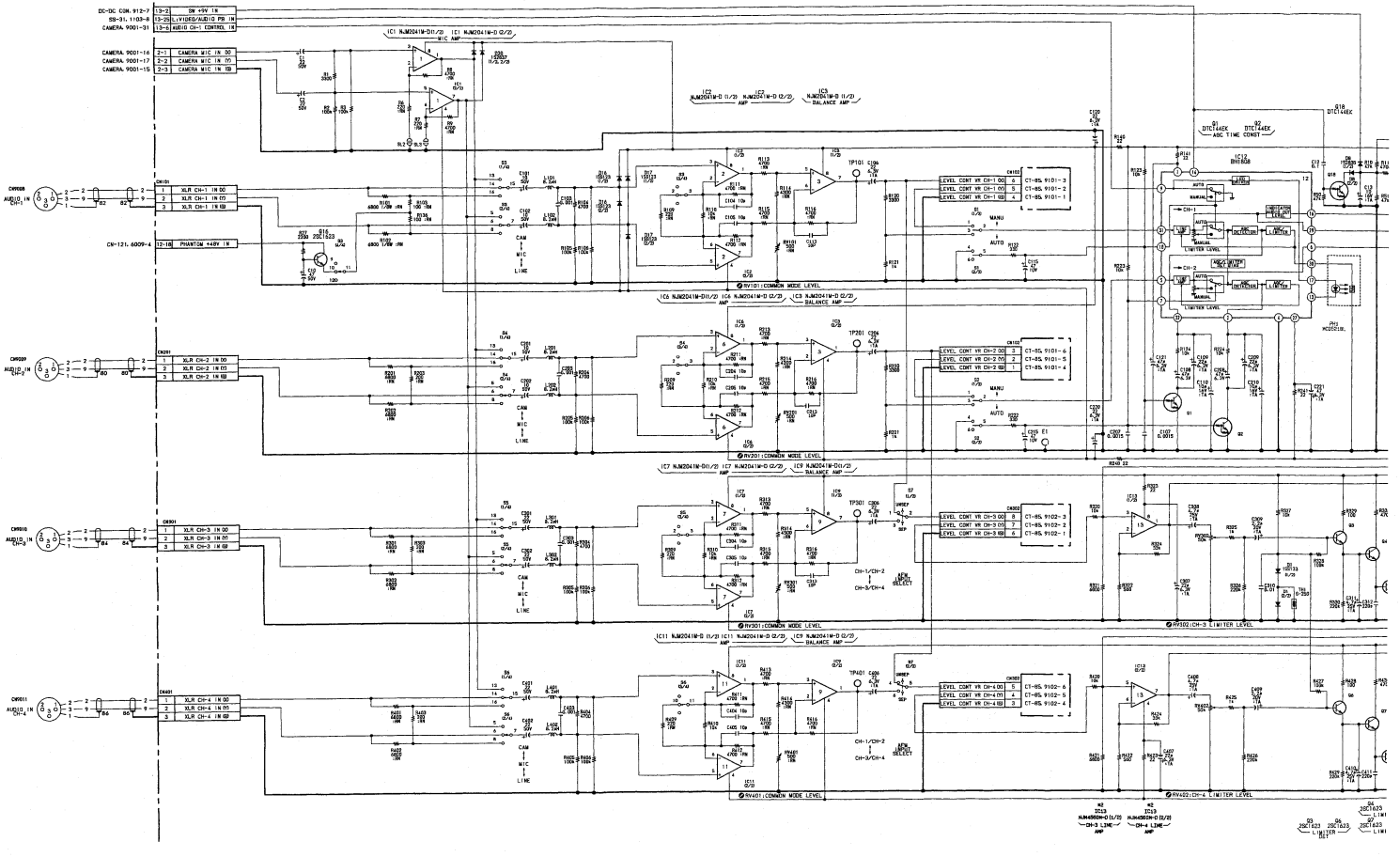

CONTROL SIG2 OUT 16-8 PB ADAPTOR CW9015-17
L:NOR FWD X1 PB 3/5
L:NOR FWD X1 PB IN 3-1 SS-31, 1202-6
UNREG +12V IN 1-19 DC-DC CON. 911-1, 2
SW +5V IN 1-15 DC-DC CON. 912-7
SW +9V IN 1-17 DC-DC CON. 912-4
SW -5V IN 1-8 DC-DC CON. 912-6
REG +5V IN 1-13 DC-DC CON. 912-2
REG -5V IN 1-10 DC-DC CON. 912-3
GND IN 1-11
GND IN 1-12
AFM RF OUT 1/5
ADV SYNC OUT 00 6-1 SS-31, 1213-2
ADV SYNC OUT 69 6-2 SS-31, 1213-1
CH-1 PB IN 00 14-1 AU-72, 8002-3
CH-1 PB IN 69 14-2 AU-72, 8002-4
CH-2 PB IN 00 14-3 AU-73, 8002-1
CH-2 PB IN 69 14-4 AU-72, 8002-2
AUDIO CH-2 PB OUT 69 16-1 CW9015-4
AUDIO CH-2 PB OUT 00 16-2 CW9015-5
AUDIO CH-1 PB OUT 69 16-3 CW9015-4
AUDIO CH-1 PB OUT 00 16-4 CW9015-3
ADV SYNC IN 69 16-5 CW9015-15
ADV SYNC IN 00 16-6 CW9015-18
PB C-RF IN 3/5
AUDIO FF/REW 3/5
SW PLUSE IN 3/5
L:AFM/HiLMG IN 1-7 TC-39, 3013-11
AUDIO FF/REW IN 3-5 SS-31, 1202-4
L:PB/HiEE IN 3-2 SS-31, 1202-5
AUDIO MUTE IN 3-4 SS-31, 1202-3
AUDIO MUTE OUT 3-5 AU-72, 8005-11
VA-S ON OUT 3-7 TC-39, 9002-5
AUDIO METER CH-1/CH-3 OUT 1-3 TC-39, 3013-16
AUDIO METER CH-2/CH-4 OUT 1-2 TC-39, 3013-17
AUDIO MONITOR OUT 1-4 TC-39, 3013-15/CH-1&3, 4004-18
VA-S ON IN 19-1 VA-SL, 9050-1
CH-1/CH-3 AUDIO LEVEL OUT 19-2 VA-SL, 9050-2
CH-2/CH-4 AUDIO LEVEL OUT 19-3 VA-SL, 9050-3
MONITOR SEL1 IN 1-6 TC-39, 3013-12
MONITOR SEL2 IN 1-5 TC-39, 3013-13
ALARM TONE IN 1-16 TC-39, 3013-7
CONF1 CH-2 PB IN 12-2 AU-72, 8007-2
CONF1 CH-1 PB IN 12-1 AU-72, 8007-3
TIME CODE CANCEL OUT 12-3 AU-72, 8007-1
L:REC 3/5
L:REC IN 3-6 AU-72, 8005-9
CH-1 REC OUT 00 13-1 AU-72, 8001-1
CH-1 REC OUT 69 13-2 AU-72, 8001-2
CH-2 REC OUT 00 13-3 AU-73, 8001-3
CH-2 REC OUT 69 13-4 AU-73, 8001-4
RV608:CH3 MIX LEVEL
RV609:AFM RF REC LEVEL
RV618:CH3 METER LEVEL
RV619:CH4 METER LEVEL
RV612:ALARM TONE LEVEL
RV613:CONF1 CH-2 PB LEVEL
RV614:CONF1 CH-1 PB LEVEL
RV615:CONF1 CANCEL
RV616:REC TC LEVEL
607
D607 152837 (1/2)

NOTE: MARK	ADDRESS	CHANGE INFORMATION	SERIAL NO.
#1	D-4	ADDED IC729 A7	J : 10801 and higher UC: 11704 and higher
	D-4	ADDED R726 0	EK: 10881 and higher
#2	C-2	RV617 DELETED	
#3	C-2	IC601 CHANGED TC40S39F→TC40S36FHB	J : 11186 and higher UC: 10542 and higher EK: 11869 and higher
#4	H-1	Q625 CHANGED 2SC2223 →2SC2714G-TE85R	J : 11086 and higher UC: 10257 and higher EK: 11702 and higher
#5	C-3	TP623 DELETED	J : 11151 and higher UC: 13226 and higher EK: 13893 and higher
#6	C-2	IC601 CHANGED TC40S39FHB →HC14053BF	J : 12131 and higher UC: 14116 and higher EK: 13798 and higher
	I-5	IC606 CHANGED TC4011BF→HC14001BF	

VA-52 (5/5)

1-602-624-14, 15, 16 (1)
DIV-S ------ VA-52
DIV-SPS ---- VA-52P

TC-39P (1/2) ; AUDIO AMPLIFIER

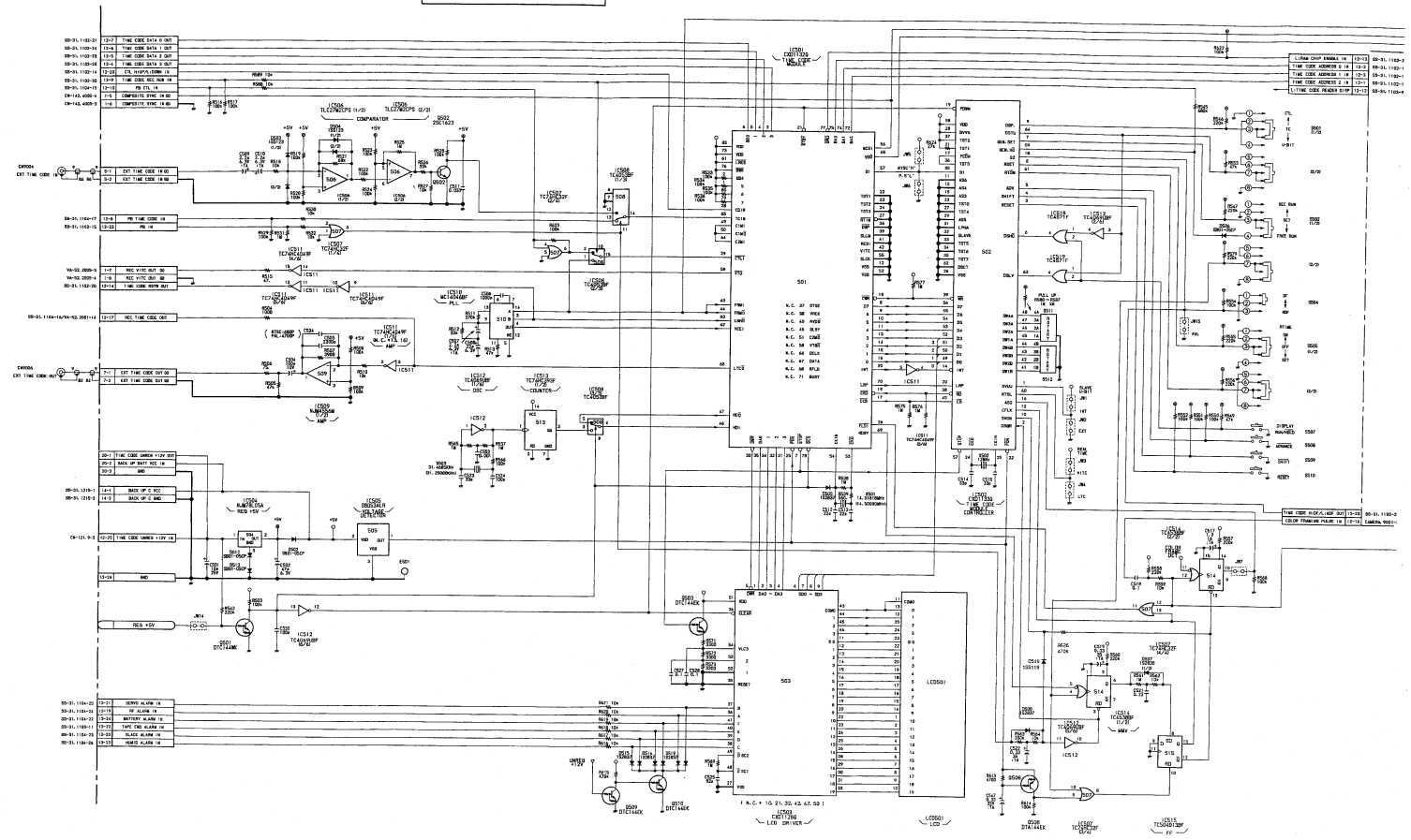


TC-39 (1/2)

TC-39P (2/2) , DUS-194 TC-39P (2/2)

TC-39P (2/2) , DUS-194; TIME CODE GENERATOR/READER

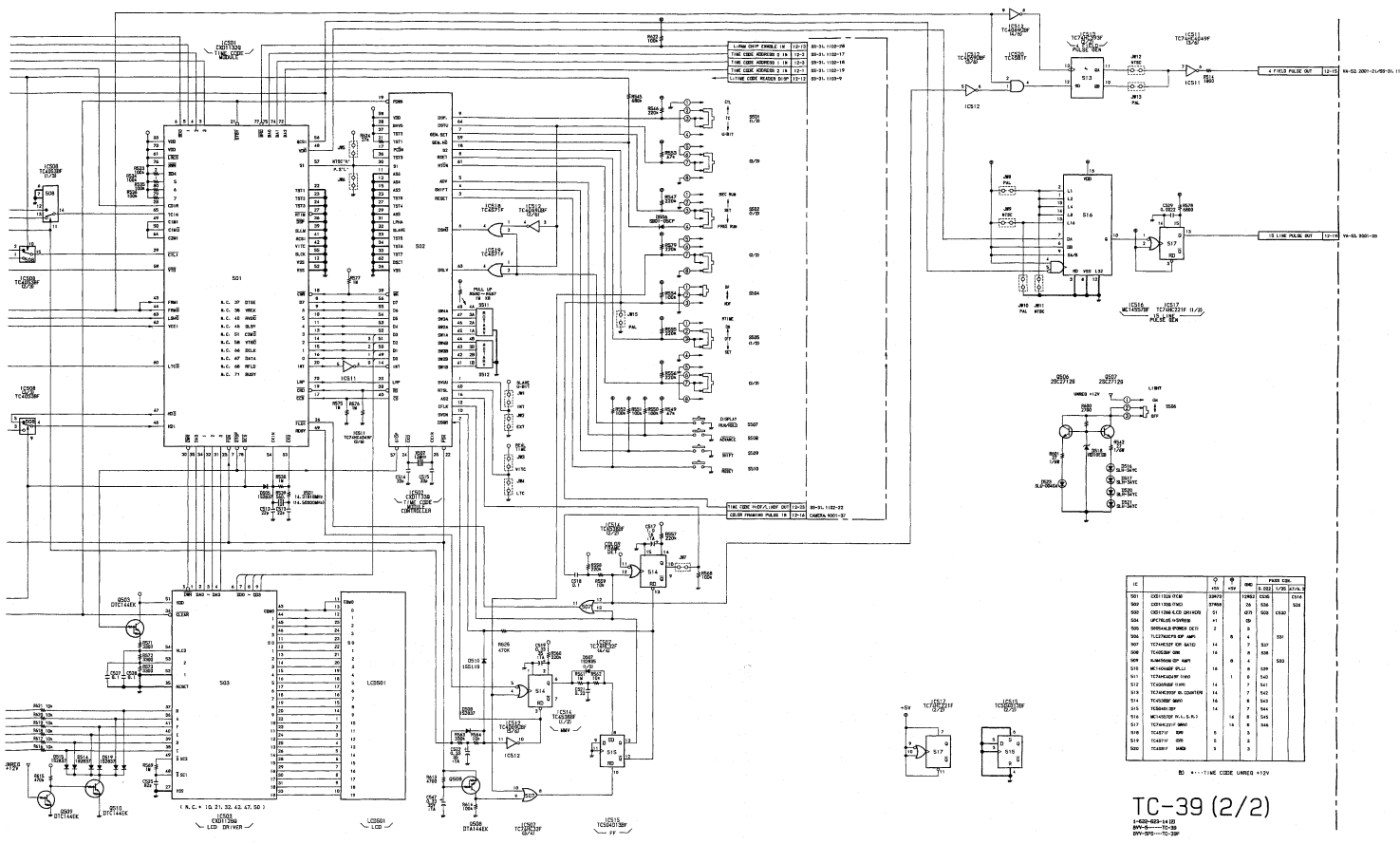
S/N 10661 to 10880



14-40 (a)

14-41 (a)

A | B | C | D | E | F | G | H



TC-39 (2/2)

1-620-629-14 (1)
SW-S ---- TC-39
SW-SYS --TC-39F

14-41 (a)

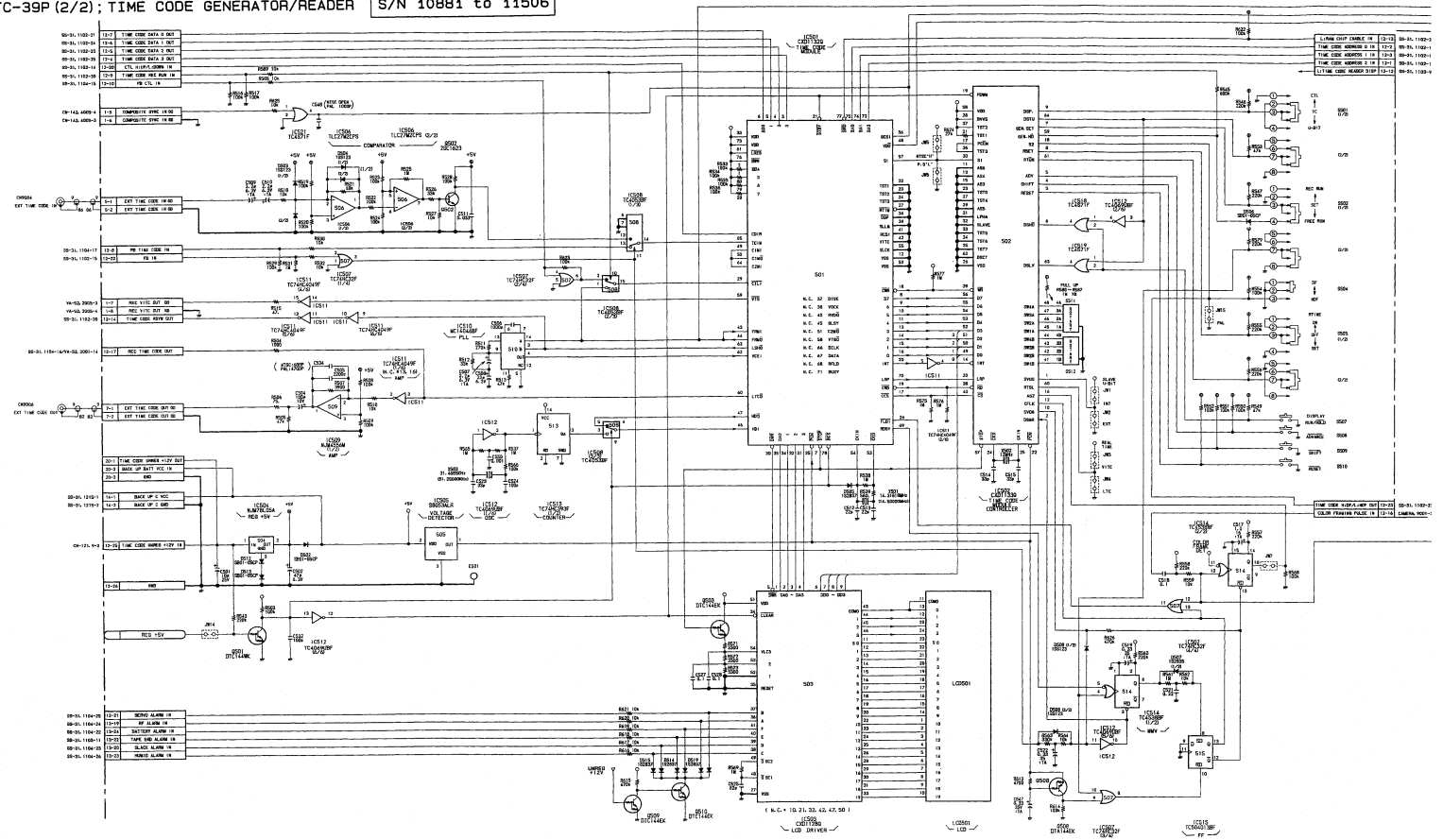
14-42 (a)

E F G H I J K L

TC-39P (2/2) TC-39P (2/2

TC-39P (2/2) ; TIME CODE GENERATOR/READER

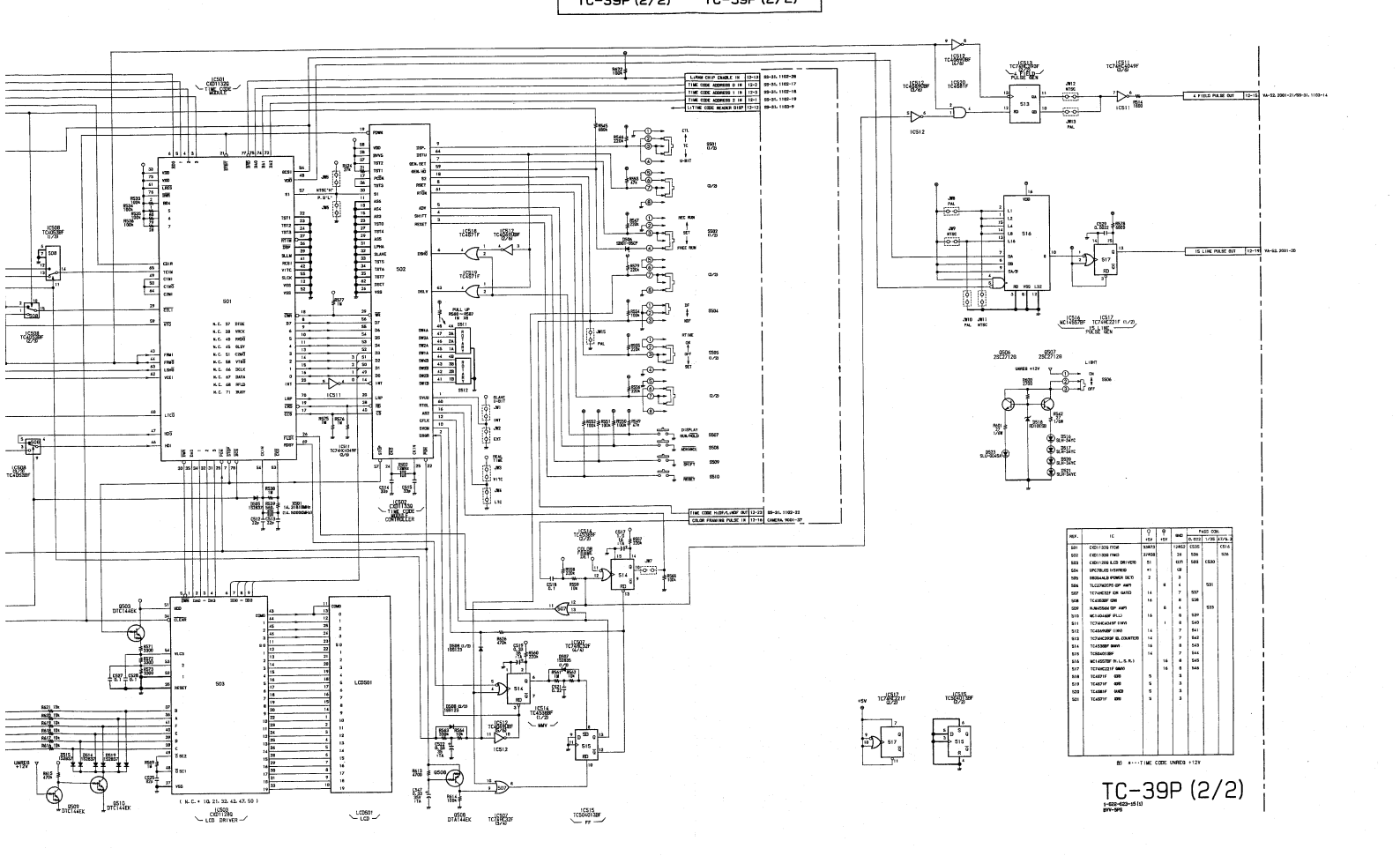
S/N 10881 to 11506



14-40 (b)

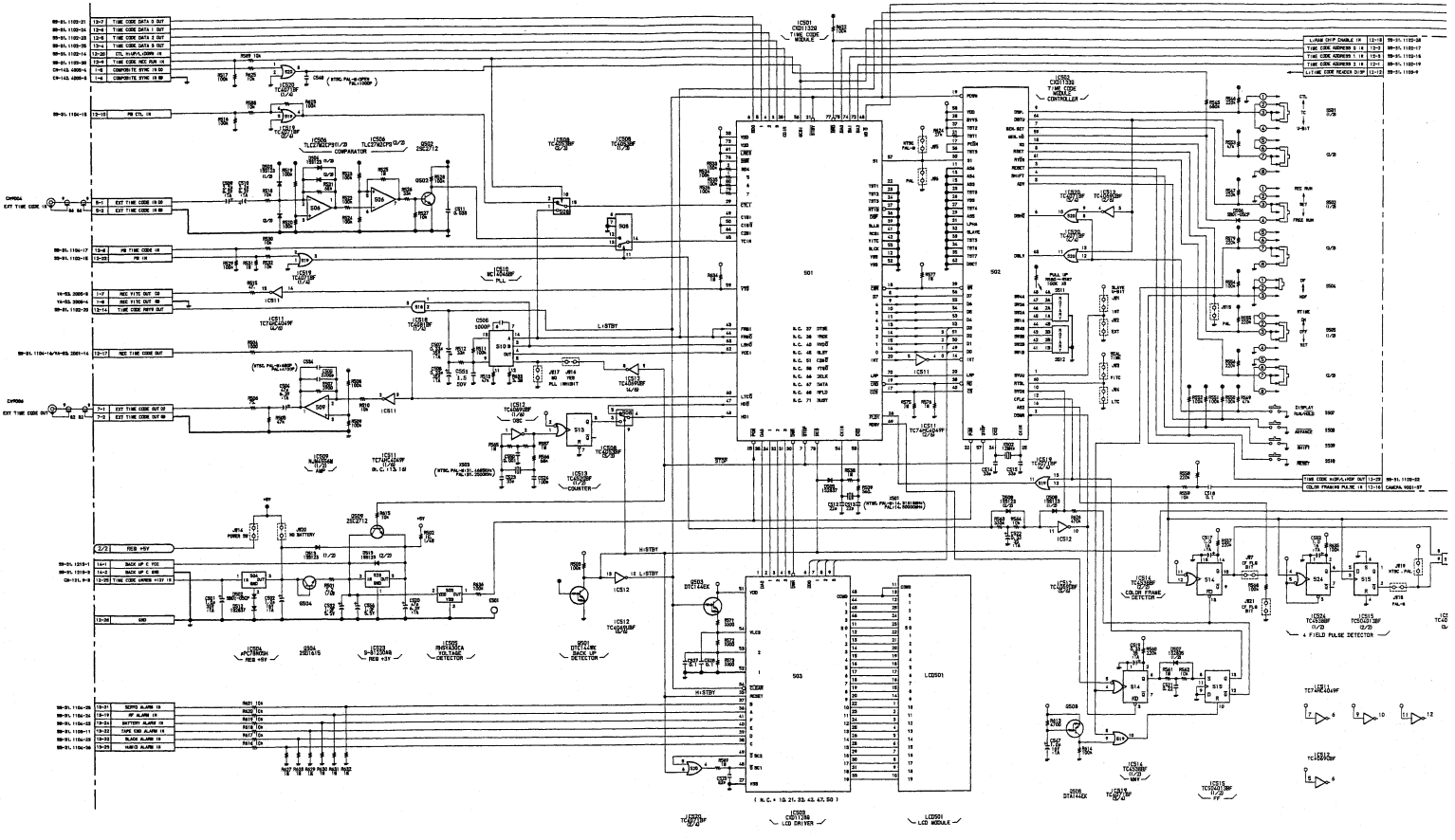
14-41 (b)

A | B | C | D | E | F | G | H


TC-39P (2/2)
TC-39P (2/2)
14-41 (b)
14-42 (b)
E
F
G
H
I
J
K
L
TC-39P (2/2)

TC-39P (2/2) TC-39P (2/2

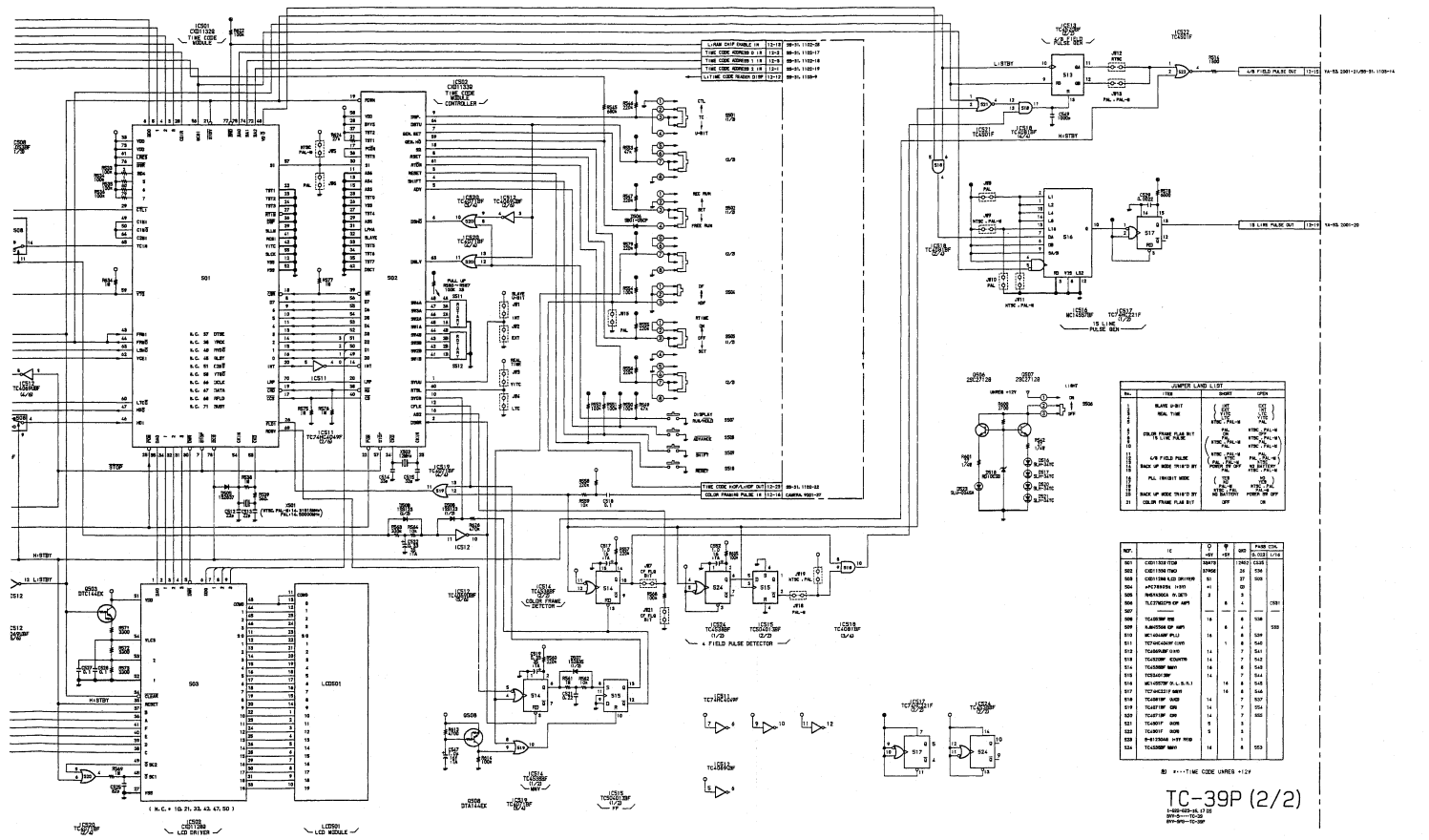
TC-39P (2/2) ; TIME CODE GENERATOR/READER S/N 11507 to 11719



14-40 (c)

14-41 (c)

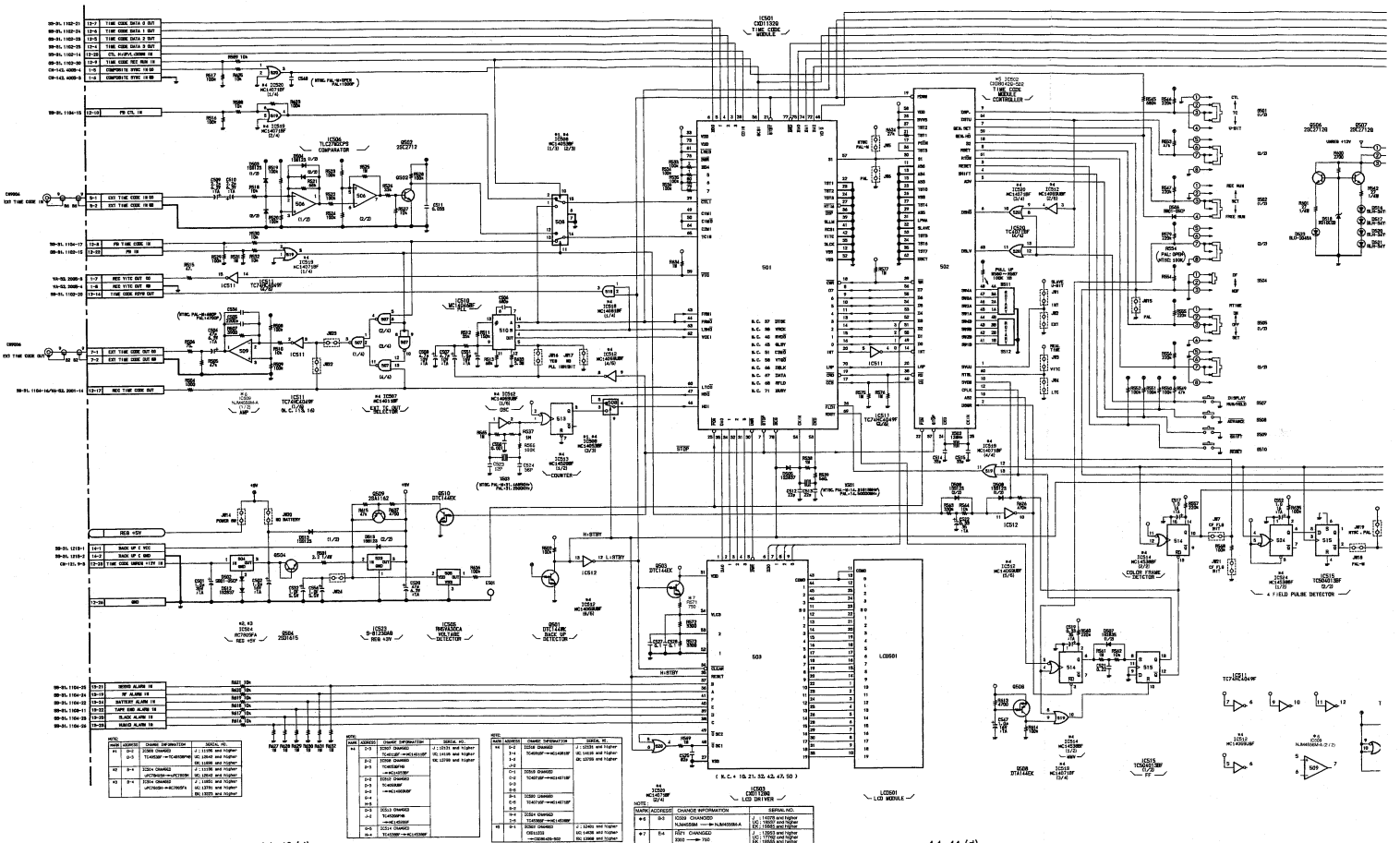
A | B | C | D | E | F | G | H | I


TC-39P (2/2)
14-41 (c)
14-42 (c)
I E I F I G I H I I I J I K I L

TC-39P (2/2)

TC-39P (2/2) ; TIME CODE GENERATOR/READER

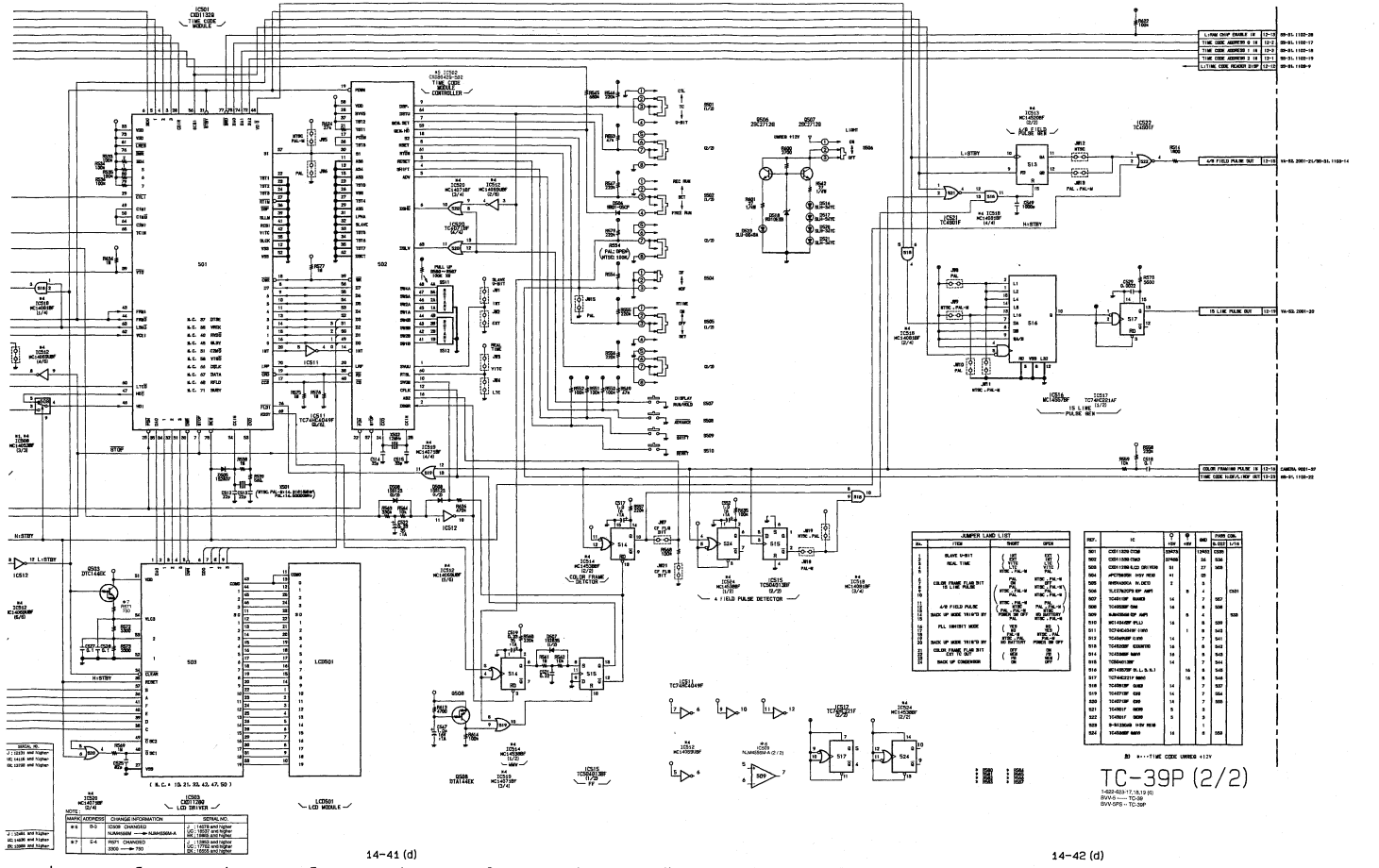
S/N 11720 and higher



14-40 (d)

14-41 (d)

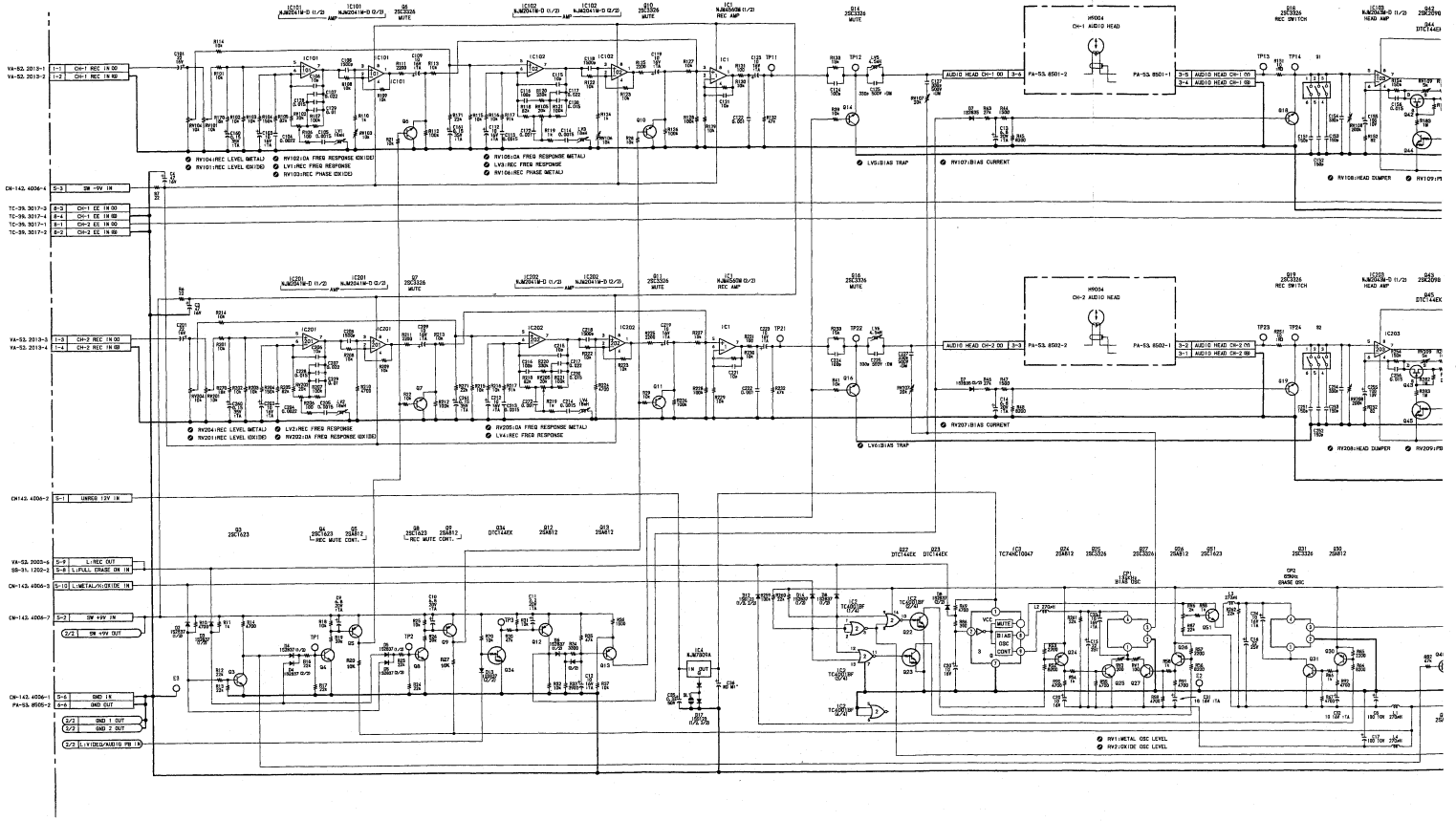
A | B | C | D | E | F | G | H



TC-39P (2/2)

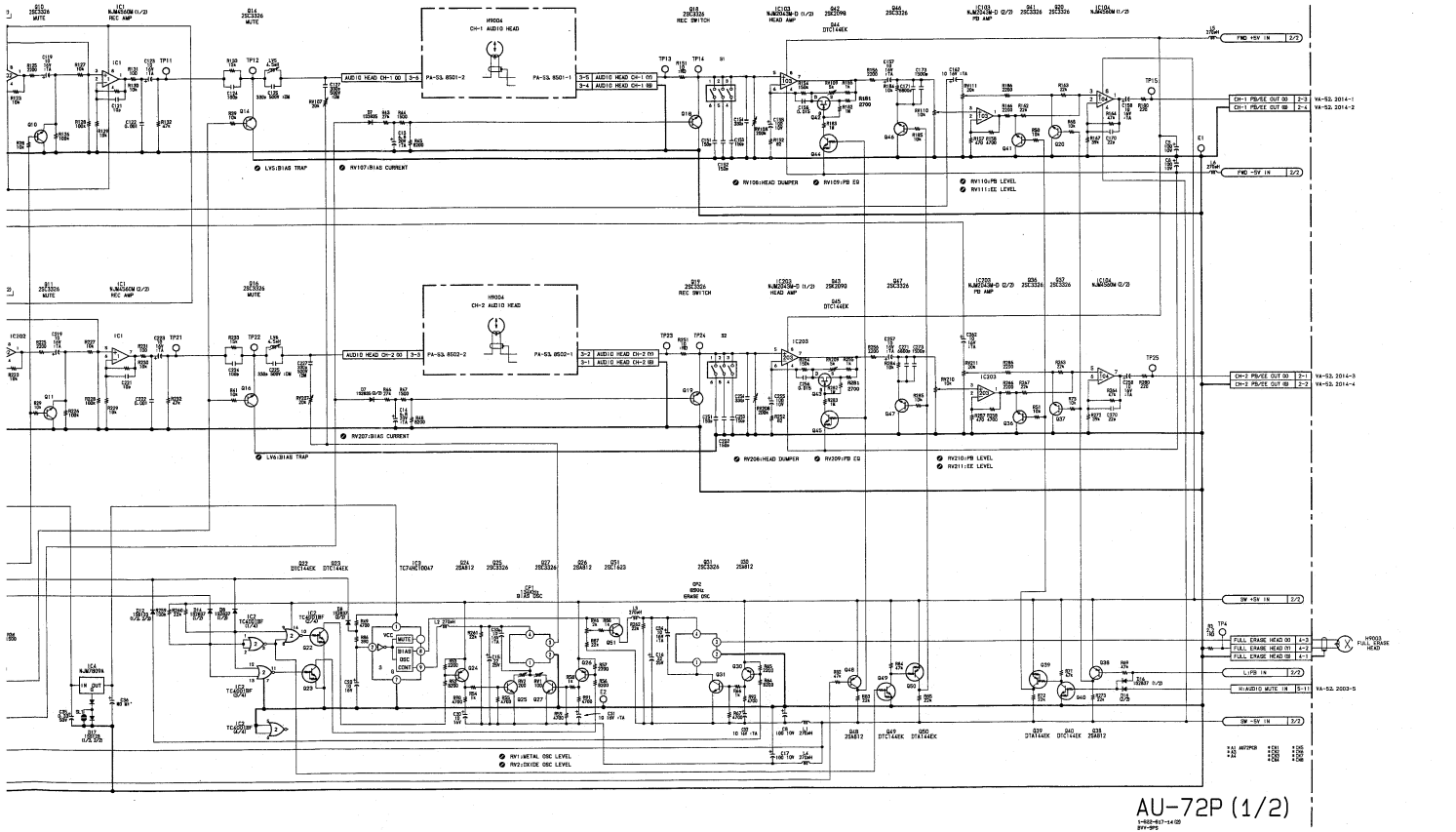
AU-72P (1/2) AU-72P (1/

AU-72P (1/2) ; AUDIO REC AMPLIFIER S/N 10661 to 10880



14-46 (a)

14-47 (a)



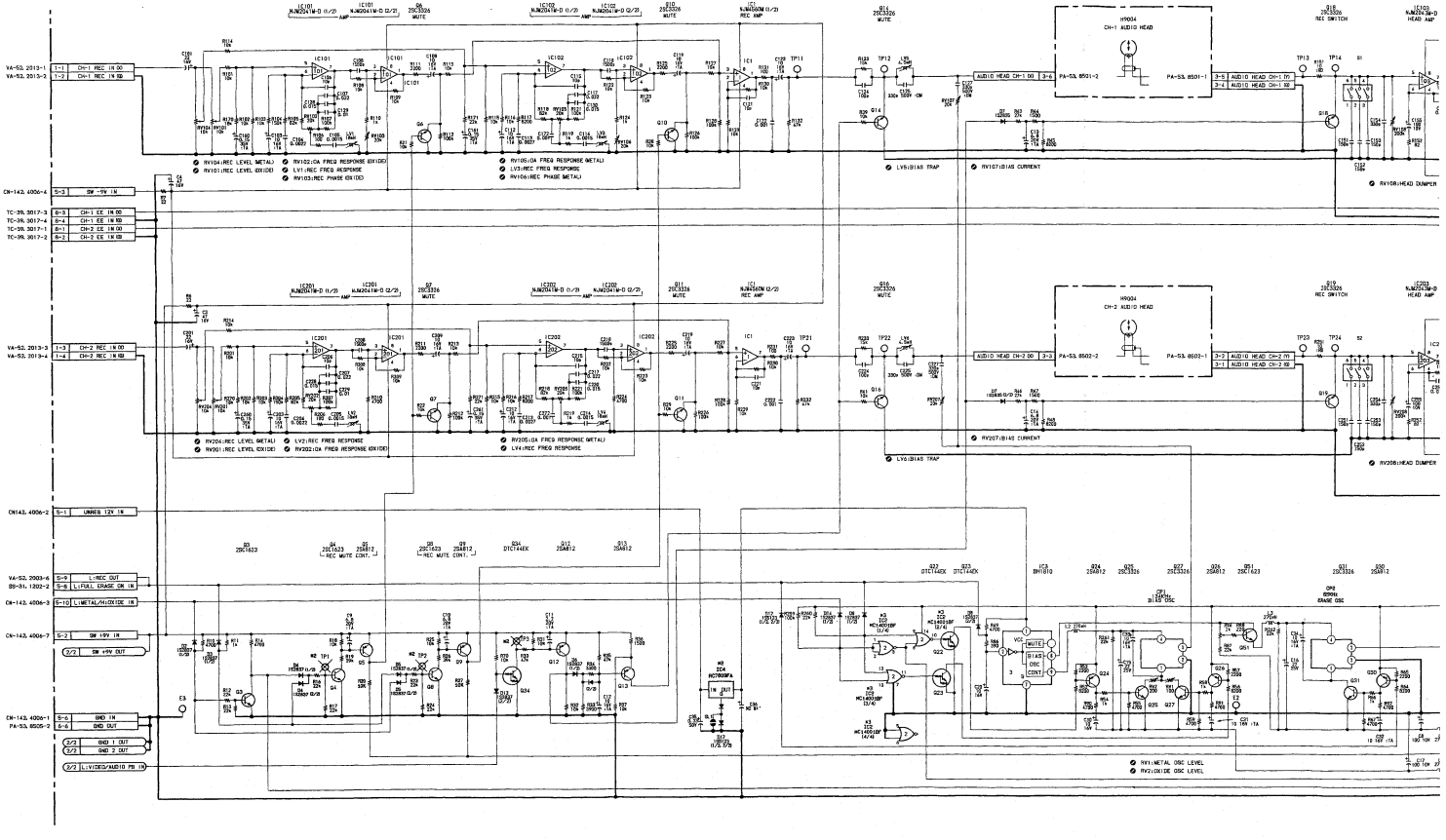
14-47 (a)

14-48 (a)

E F G H I J K L

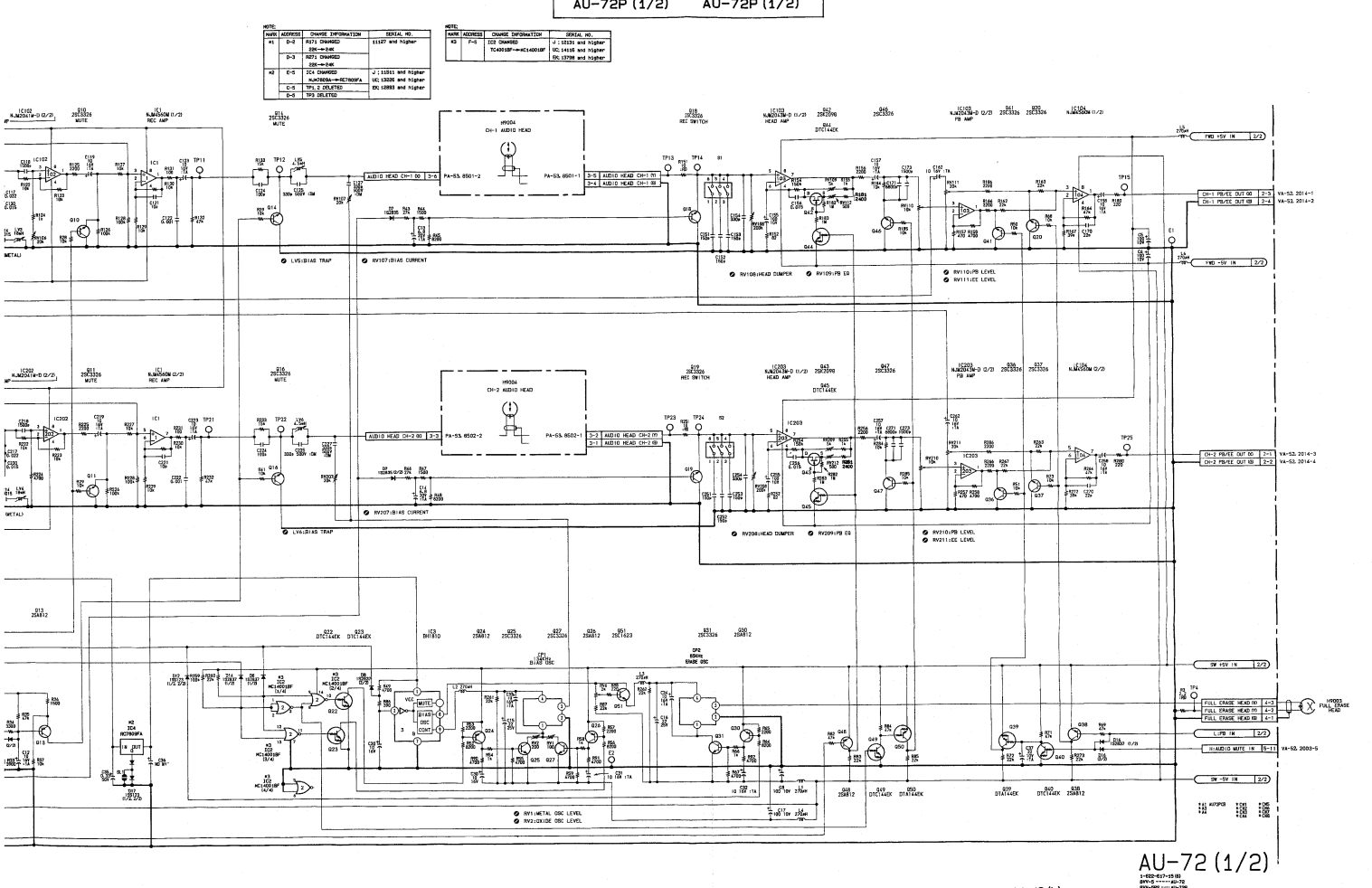
AU-72P (1/2) AU-72P (1/2)

AU-72P (1/2) ; AUDIO REC AMPLIFIER S/N 10881 and higher

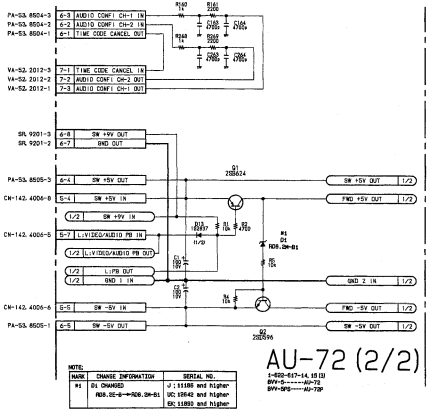


14-46 (b) 14-47 (b)

A B C D E F G H


AU-72P (1/2)
AU-72P (1/2)
NOTE:
MARK ADDRESS CHANGE INFORMATION SERIAL NO.
#1 D-2 R271 CHANGED 11127 and higher
22K→24K
D-3 R271 CHANGED
22K→24K
#2 E-5 IC4 CHANGED J : 11511 and higher
NJM2809A→RC7805FA UC: 13205 and higher
E-5 TP1.2 DELETED EK: 12893 and higher
D-6 TP3 DELETED
NOTE:
MARK ADDRESS CHANGE INFORMATION SERIAL NO.
#3 F-3 IC2 CHANGED J : 12191 and higher
TC4016BF→MC14016BF UC: 14116 and higher
EK: 13798 and higher
AUDIO HEAD CH-1 00 3-4
PA-53. 8501-2
PA-53. 8501-1
3-5 AUDIO HEAD CH-1 01
3-4 AUDIO HEAD CH-1 00
AUDIO HEAD CH-2 00 3-3
PA-53. 8502-2
PA-53. 8502-1
3-3 AUDIO HEAD CH-2 01
3-1 AUDIO HEAD CH-2 00
CH-1 PB/EE OUT 00 2-3 VA-53. 2014-1
CH-1 PB/EE OUT 01 2-4 VA-53. 2014-2
CH-2 PB/EE OUT 00 2-1 VA-53. 2014-3
CH-2 PB/EE OUT 01 2-2 VA-53. 2014-4
FWD +5V IN 2/3
RWD +5V IN 2/3
SW +5V IN 2/3
SW -5V IN 2/3
L.PB IN 2/3
H.AUDIO MUTE IN 5-11 VA-53. 2003-5
FULL ERASE HEAD F0 4-3
FULL ERASE HEAD F1 4-1
FULL ERASE HEAD R0 4-4
HY0004 CH-1 AUDIO HEAD
HY0004 CH-2 AUDIO HEAD
HY0003 FULL ERASE HEAD
LVS:BIAS TRAP
RV107:BIAS CURRENT
RV106:HEAD DUMPER
RV109:PB EQ
RV110:PB LEVEL
RV111:IDE LEVEL
LVS:BIAS TRAP
RV207:BIAS CURRENT
RV208:HEAD DUMPER
RV209:PB EQ
RV210:PB LEVEL
RV211:IDE LEVEL
RV1:METAL OSC LEVEL
RV2:IDE OSC LEVEL
AU-72 (1/2)
14-47 (b)
14-48 (b)
E
F
G
H
I
J
K
L

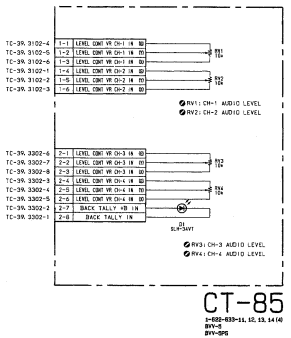
AU-72P (2/2) ; AUDIO REC AMPLIFIER

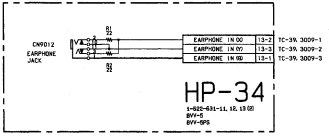


NOTE:

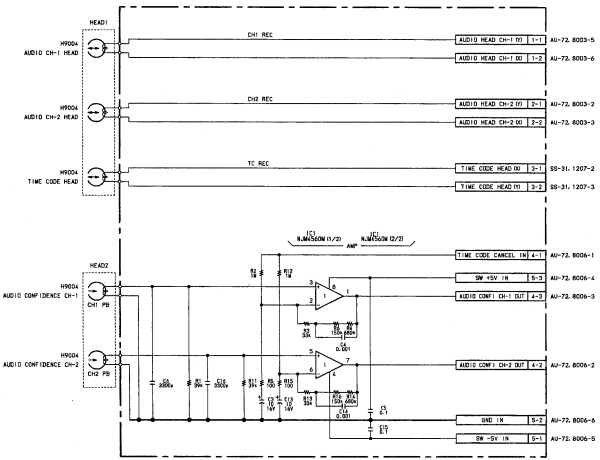
MARK	CHANGE INFORMATION	SERIAL NO.
#1	D1 CHANGED RD6.2E-B---→RD6.2M-B1	J : 11186 and higher UC: 13642 and higher EK: 11893 and higher

CT-85; AUDIO LEVEL CONTROL
HP-34; EARPHONE JACK



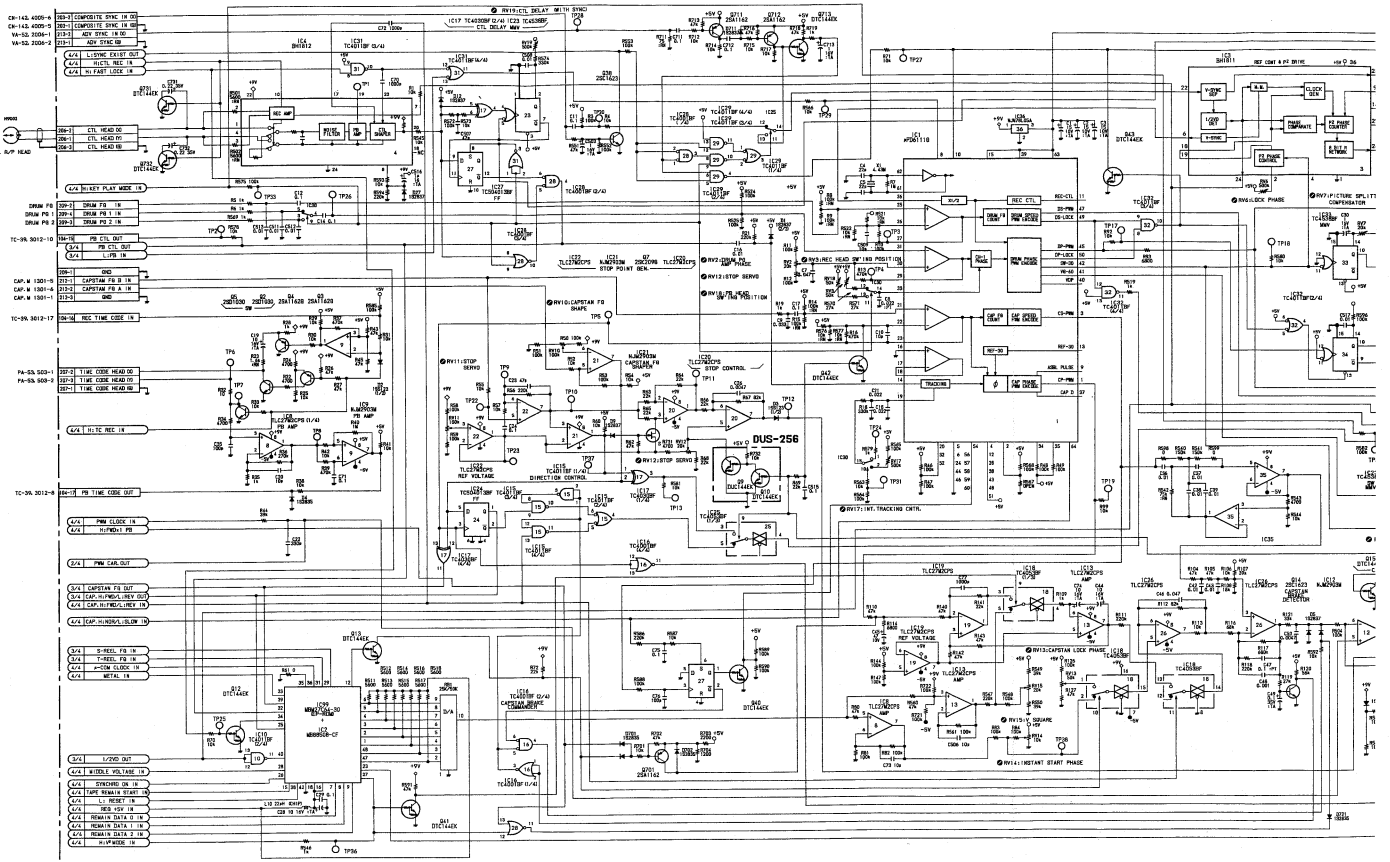


PA-53; CONFI./PB AMPLIFIER

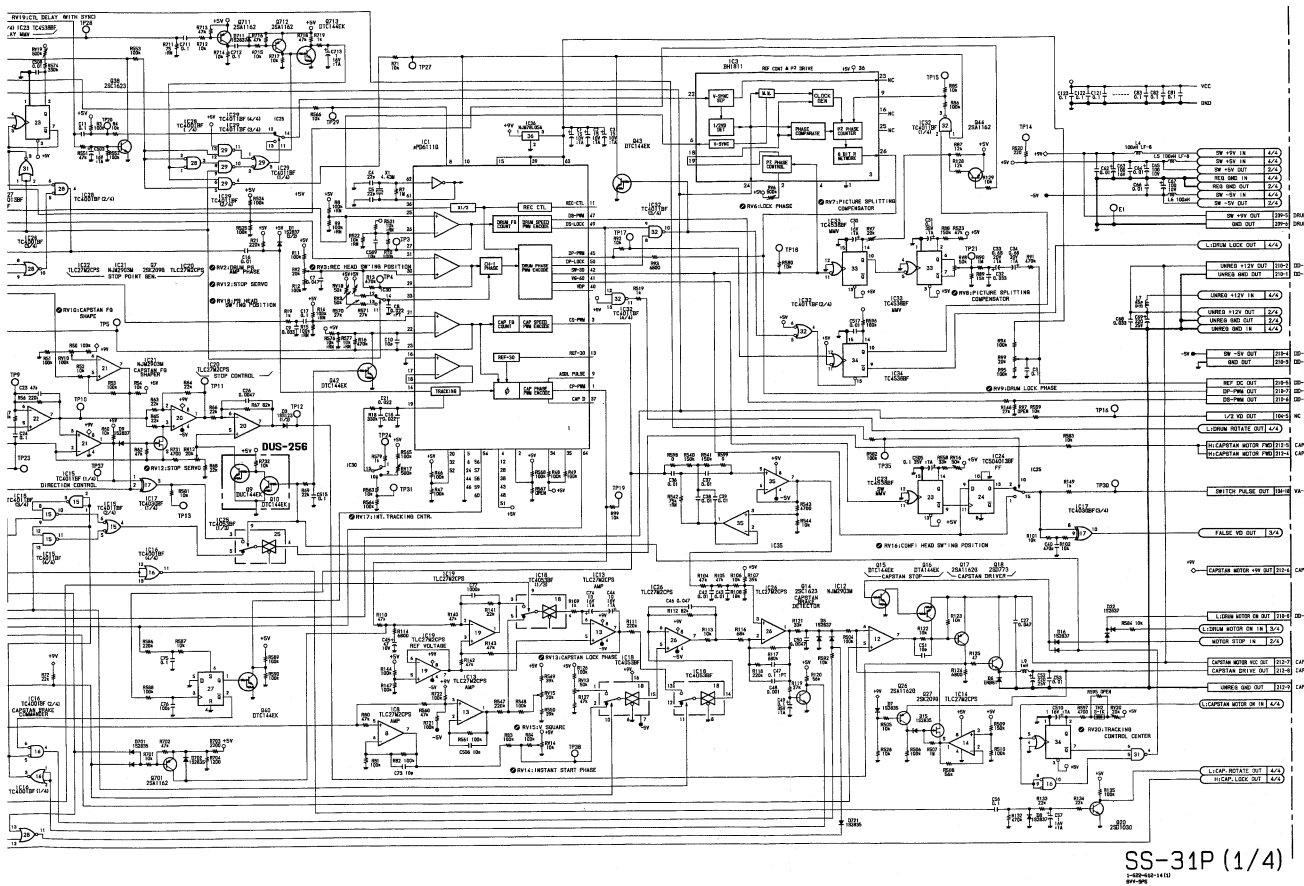


SS-31P (1/4), DUS-256; SERVO SYSTEM

S/N 10661 to 10880



SS-31P (1/4) , DUS-256



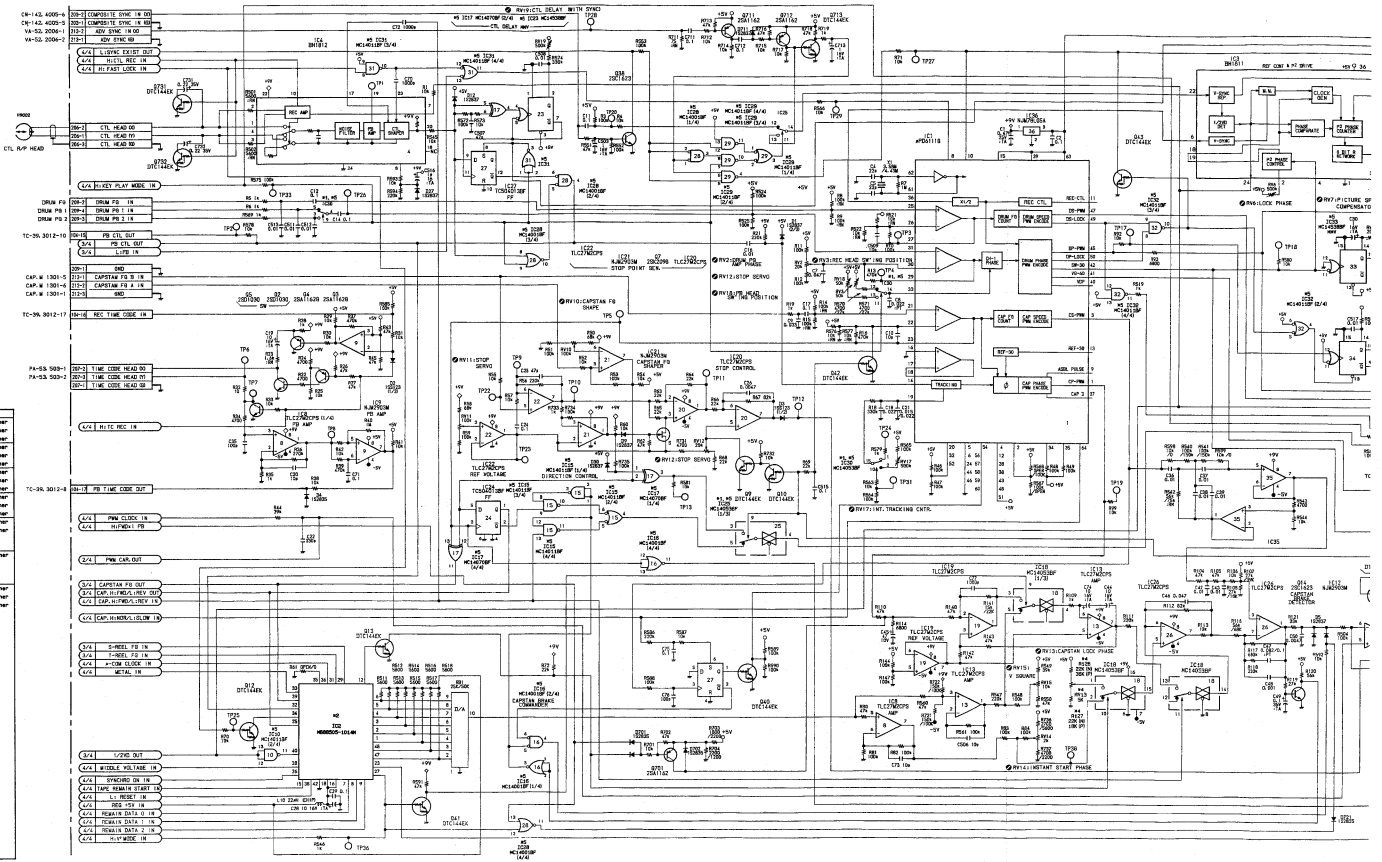
14-59 (a)

14-60 (a)

E F G H I J K L

SS-31P (1/4) SS-31P (1/4

SS-31P (1/4) ; SERVO SYSTEM S/N 10881 and higher

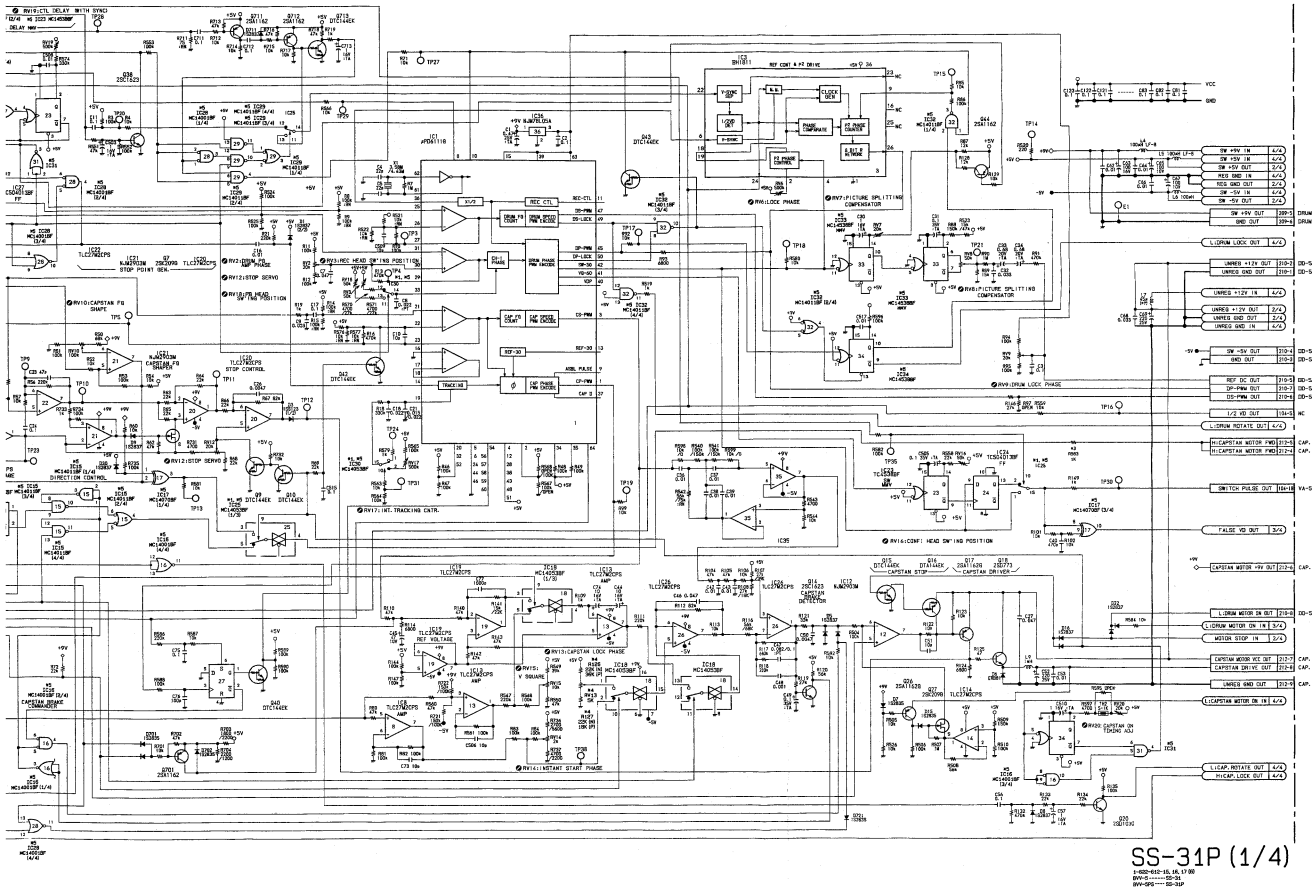


MARK	ADDRESS	CHANGE INFORMATION	SERIAL NO.
M1		IC201, 2E CHANGED TC4053BF→TC4053BFNG	J : 11189 and higher UC: 13542 and higher EK: 13550 and higher
M2	IC9 CHANGED M5M5205P-10YP →M5M5205-10YP	J : 11189 and higher UC: 13542 and higher EK: 13550 and higher
M3	R583 CHANGED 10K→8.2K	J : 11451 and higher UC: 13571 and higher EK: 13778 and higher
M4	D-5 RV13 CHANGED 50K→5K	J : 12131 and higher UC: 14128 and higher EK: 13798 and higher
	R155 CHANGED 39K→22K	J : 12131 and higher UC: 14118 and higher
	R157 CHANGED 39K→22K	
	R158 CHANGED 82K→39K	EK: 13798 and higher
	R157 CHANGED 39K→18K	
M5	D-5 IC10 CHANGED TC4011BF→MC14011BF	J : 12131 and higher UC: 14118 and higher EK: 13798 and higher
	E-4 IC15 CHANGED TC4011BF→MC14011BF	
	D-5 IC16 CHANGED TC4011BF→MC14011BF	
	D-4 IC17 CHANGED TC4030BF→MC14070BF	
	D-1 IC23 CHANGED TC4030BF→MC14030BF	
	F-3 IC25 CHANGED TC4023BP/BF →MC14023BF	
	D-2 IC26 CHANGED TC4011BF→MC14011BF	
	F-3 IC28 CHANGED TC4023BP/BF →MC14023BF	
	D-1 IC31 CHANGED TC4011BF→MC14011BF	
	D-2 IC32 CHANGED TC4011BF→MC14011BF	
	I-2 IC33 CHANGED TC4030BF→MC14030BF	
	I-3 IC34 CHANGED TC4030BF→MC14030BF	

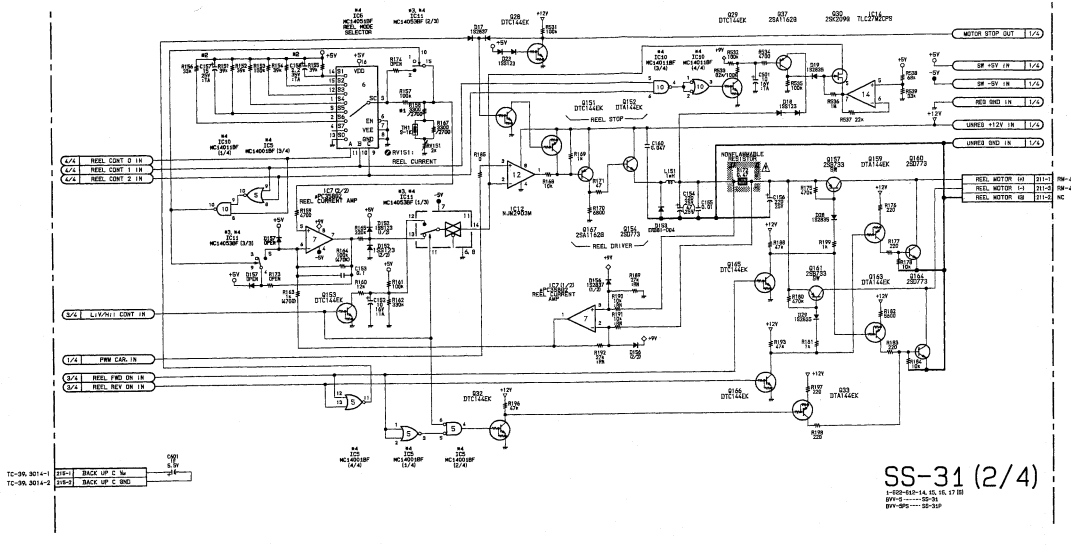
14-58 (b)

14-59 (b)

A | B | C | D | E | F | G | H


SS-31P (1/4)
14-59 (b)
14-60 (b)
I E I F I G I H I I I J I K I L

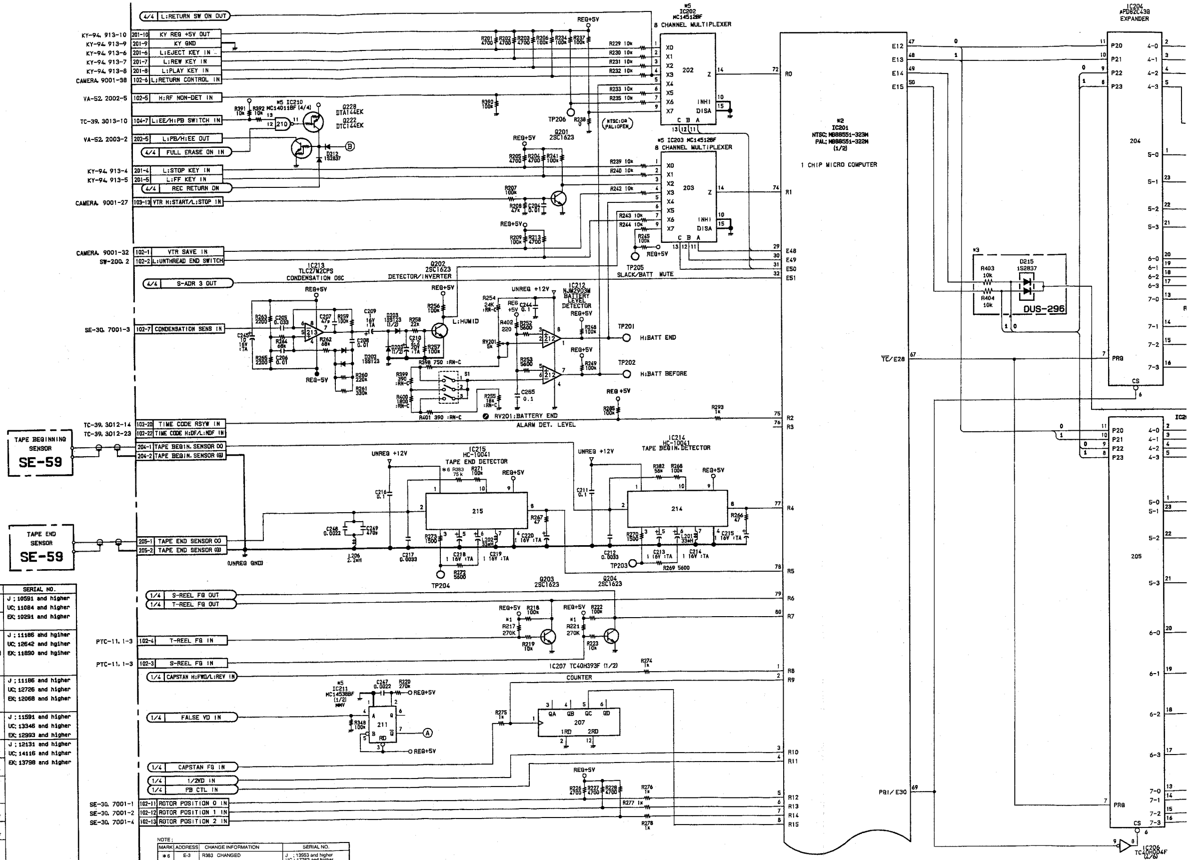
SS-31P (2/4) ; SERVO SYSTEM



NOTE:			
MARK	ADDRESS	CHANGE INFORMATION	SERIAL NO.
R1	C-2	R1SB CHANGED 5200→9700	J : 10741 and higher UC: 11424 and higher
M2	B-2	DELETED C157 16 25V	EK: 11507 and higher
	C-2	DELETED C158 2.2 35V	
M3	C-2	IC11 CHANGED TC4053BF→TC4053BFNB	J : 11186 and higher UC: 10542 and higher EK: 11892 and higher
M4	B-2	IC5 CHANGED TC4001BF→MC14001BF	J : 12131 and higher UC: 14116 and higher EK: 13708 and higher
	C-3	IC6 CHANGED TC4015BF→MC14015BF	
	C-1	IC9 CHANGED TC4053BF→MC14053BF	
	B-2	IC10 CHANGED TC4011BF→MC14011BF	
	E-2	IC11 CHANGED TC4053BFNB →MC14053BF	
	C-2		

NOTE: **The shaded and ⚠ -marked components are critical to safety.**
Replace only with same components as specified.

SS-31P (3/4) ; SYSTEM CONTROL

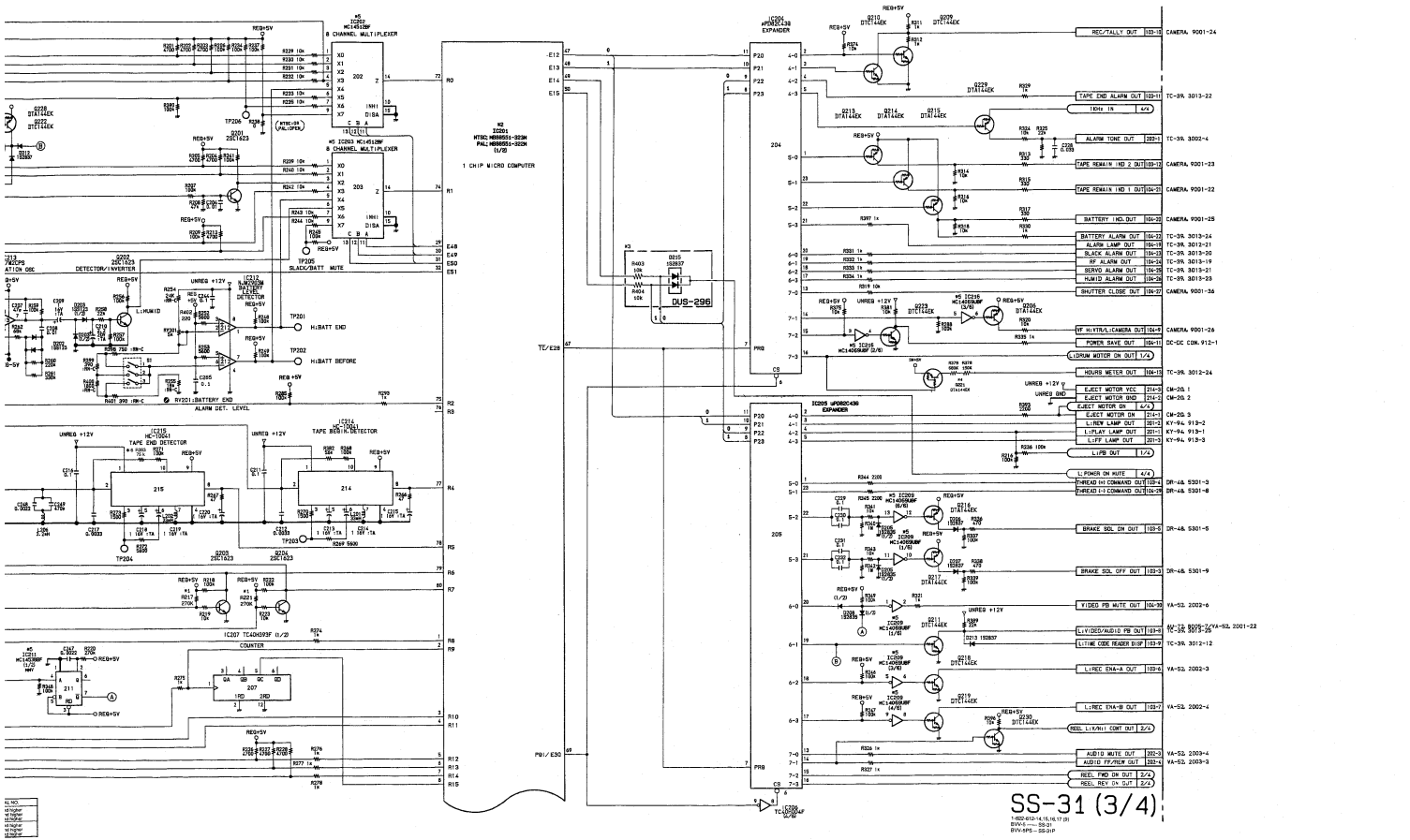


NOTE;

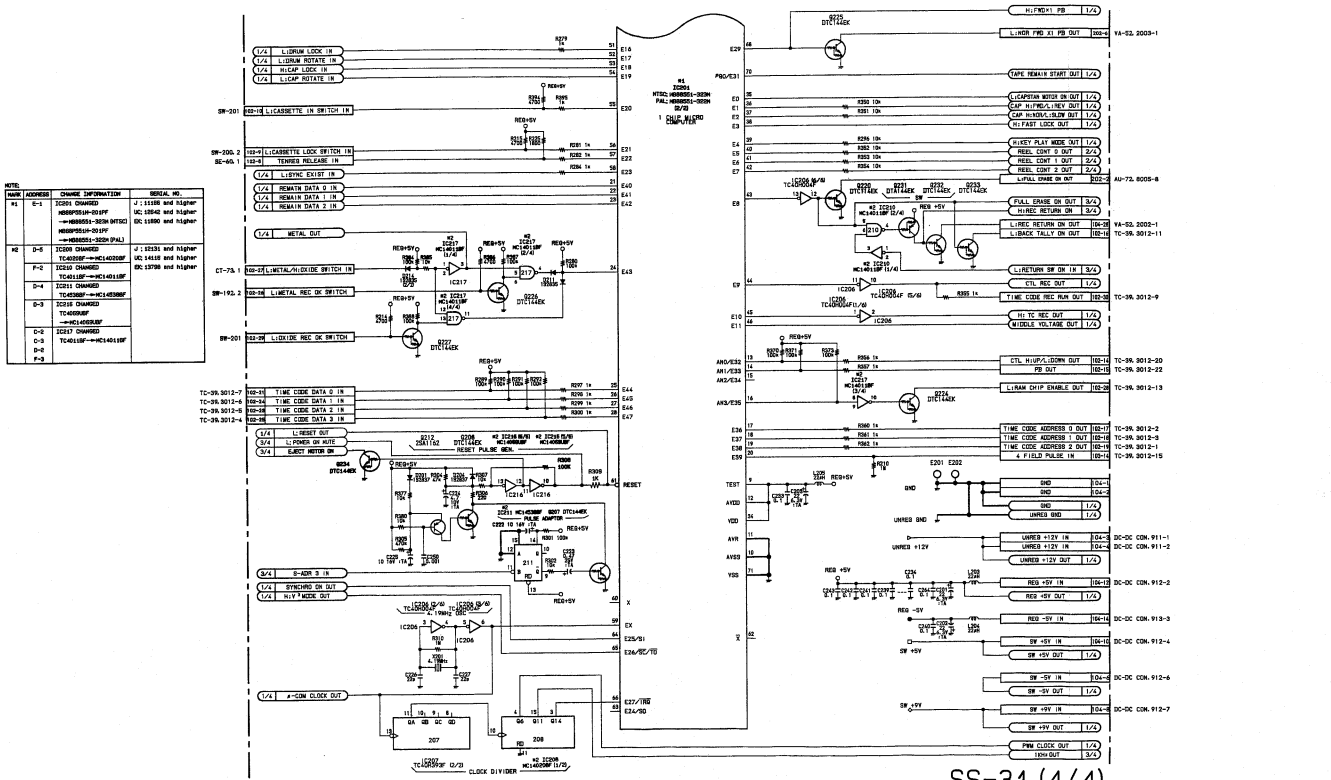
MARK	ADDRESS	CHANGE INFORMATION	SERIAL NO.
*1	E-4	R217 CHANGED 330K→270K	J ; 10591 and higher UC; 11084 and higher EK; 10291 and higher
	F-4	R221 CHANGED 330K→270K	
*2	G-1	IC201 CHANGED MB88P551H-201PF →MB88551-323M (NTSC) MB88P551H-201PF →MB88551-322M (PAL)	J ; 11186 and hgiher UC; 12642 and hgiher EK; 11890 and hgiher
*3	H-2	ADDED D215 1S2837 R403 10K R404 10K	J ; 11186 and higher UC; 12726 and higher EK; 12068 and higher
*4	J-3	Q221 CHANGED DTC144EK→DTA144EK	J ; 11591 and higher UC; 13346 and higher EK; 12993 and higher
*5	F-1	IC202 CHANGED TC4512BF→MC14512BF	J ; 12131 and higher UC; 14116 and higher EK; 13798 and higher
	F-2	IC203 CHANGED TC4512BF→MC14512BF	
	I-4 I-5	IC209 CHANGED TC4069UBF →MC14069UBF	
	D-1	IC210 CHANGED TC4011BF→MC14011BF	
	E-5	IC211 CHANGED TC4538BF→MC14538BF	
	I-2 J-2	IC216 CHANGED TC4069UBF →MC14069UBF	

NOTE ;

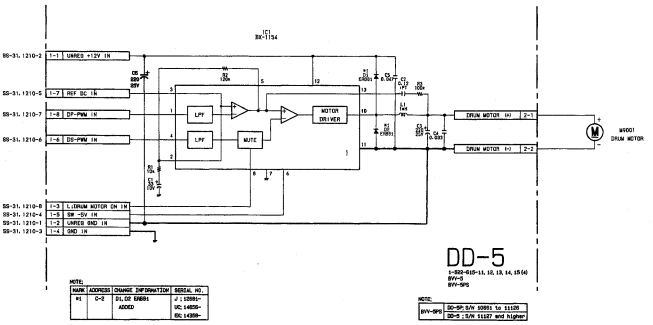
MARK	ADDRESS	CHANGE INFORMATION	SERIAL NO.
*6	E-3	R383 CHANGED 56 k→68 k	J ; 13953 and higher UC ; 17762 and higher EK ; 18555 and higher
		R383 CHANGED 68 k→75 k	J ; 13988 and higher UC ; 18047 and higher EK ; 19075 and higher


SS-31 (3/4)
14-69
14-70
E
F
G
H
I
J
K
L

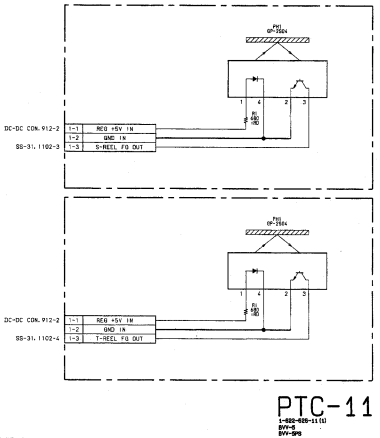
SS-31P (4/4) ; SYSTEM CONTROL



DD-5/P: DRUM MOTOR DRIVER



PTC-11; SUPPLY/TAKE-UP REEL ROTATION DETECTOR

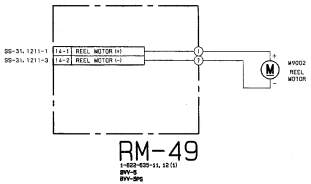


PTC-11

1-622-635-11 (1)
SVY-5
SVY-SPS

RM-49; REEL MOTOR DRIVER

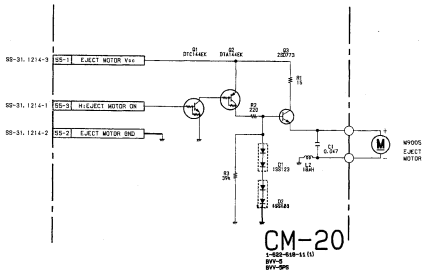
EK; S/N 10661 to 12777



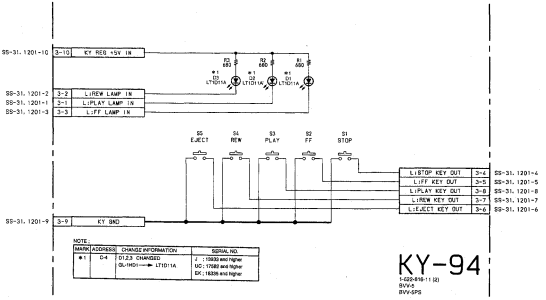
RM-49

1-622-635-11, 12 (1)
SVY-5
SVY-SPS

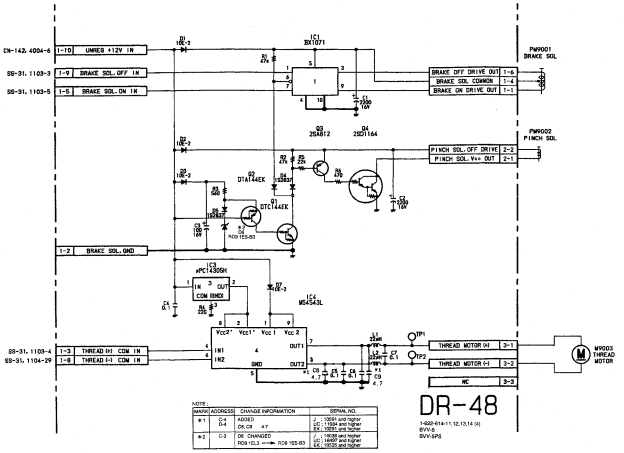
CM-20; EJECT MOTOR

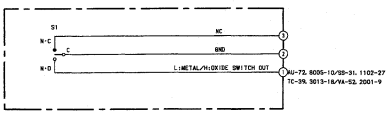


KY-94; FUNCTION KEY/DISPLAY

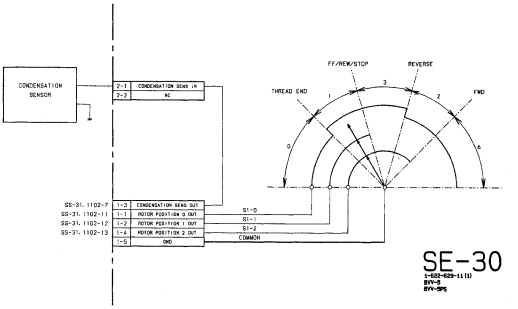


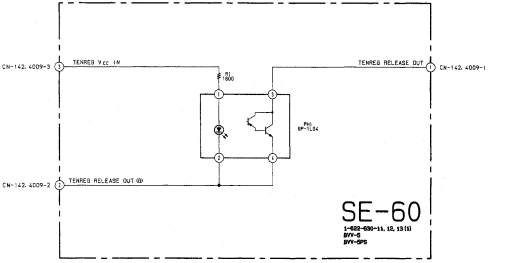
DR-48; PINCH/BRAKE SOLENOIDS AND THREADING MOTOR DRIVER
CT-73; METAL/OXIDE SELECTOR



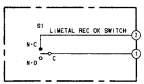


SE-30; MECHANICAL FUNCTION CONTROL SENSOR
SE-60; TENSION REGULATOR RELEASE

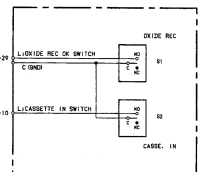




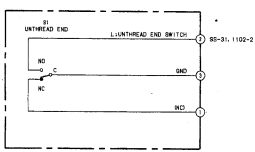
SW-192; REC INHIBIT SWITCH FOR METAL
SW-200; CASSETTE-UP COMPARTMENT LOCK/UNTHREADING END SWITCH
SW-201; CASSETTE-IN SWITCH/REC INHIBIT SWITCH FOR OXIDE



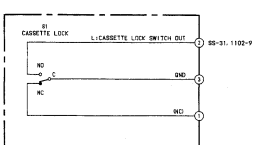
SW-192
1-532-552-11, 12 (1)
BVV-5
BVV-5PS



SW-201
1-532-619-11, 12 (1)
BVV-5
BVV-5PS

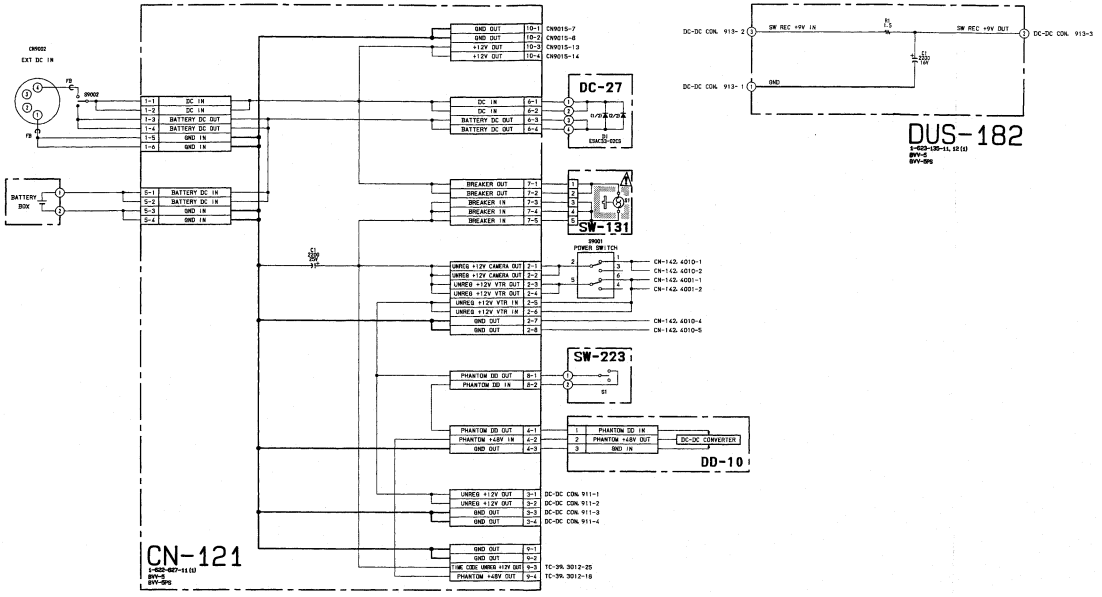


SW-200
1-532-620-11, 12 (1)
BVV-5
BVV-5PS



SW-200
1-532-620-11, 12 (1)
BVV-5
BVV-5PS

CN-121; DC INPUT RELAY
DC-27; EXTERNAL DC BACKUP
DD-10; PHANTOM DC-DC CONVERTER (FOR UC, EK)
DUS-182; RIPPLE FILTER
SW-131; BREAKER
SW-223; PHANTOM ON/OFF SWITCH (FOR UC, EK)



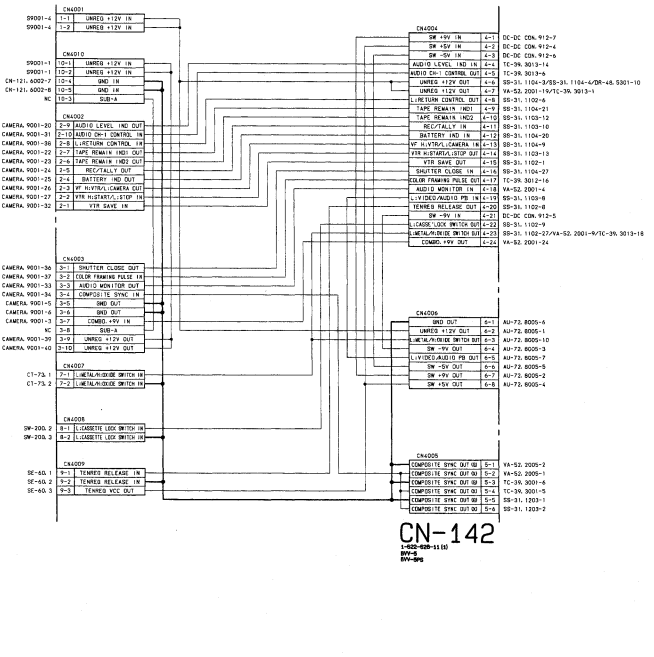
NOTE: The shaded and ⚠ -marked components are critical to safety.
Replace only with same components as specified.

14-91 14-92

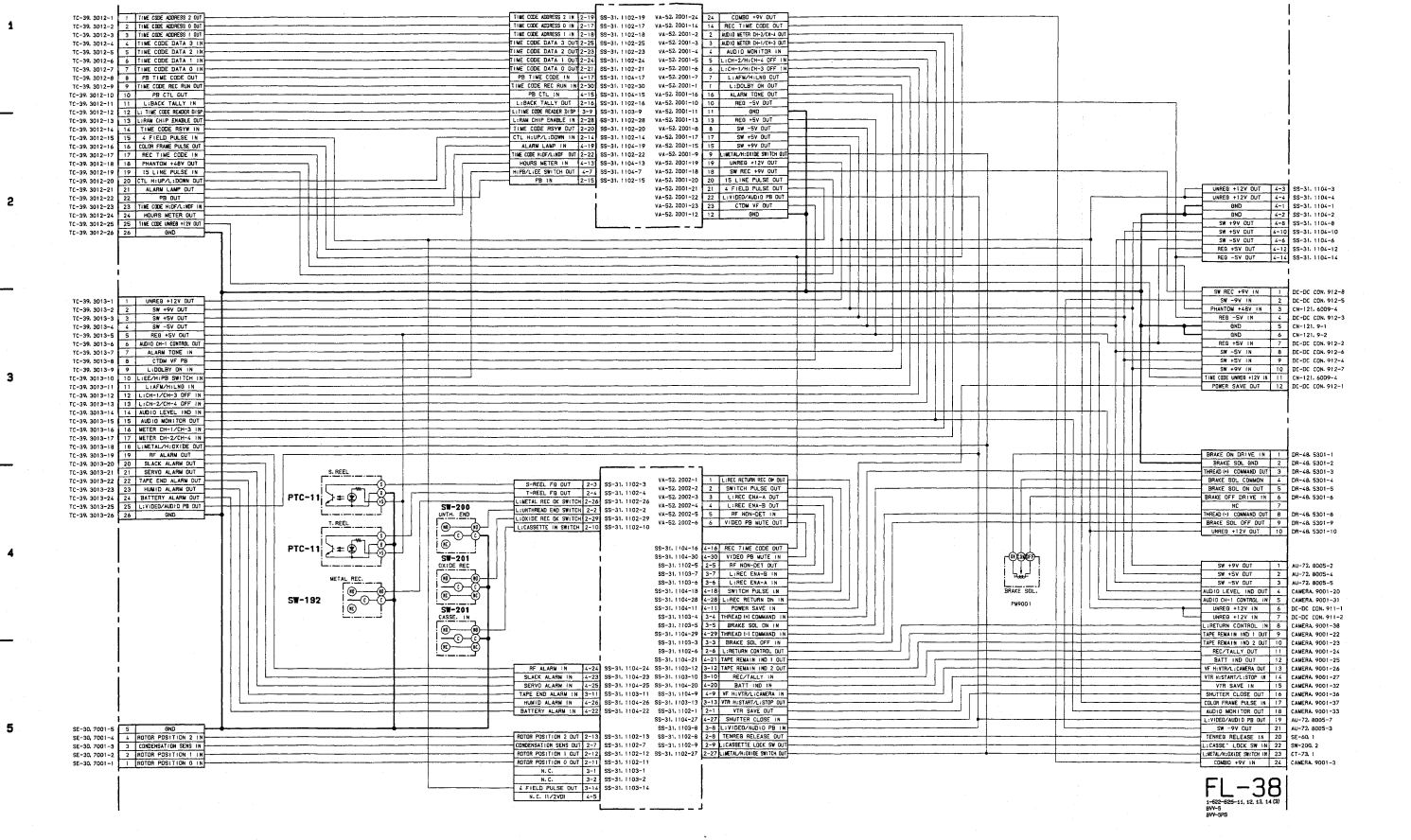
A B C D E F G H

SP-00550/ Druck 60

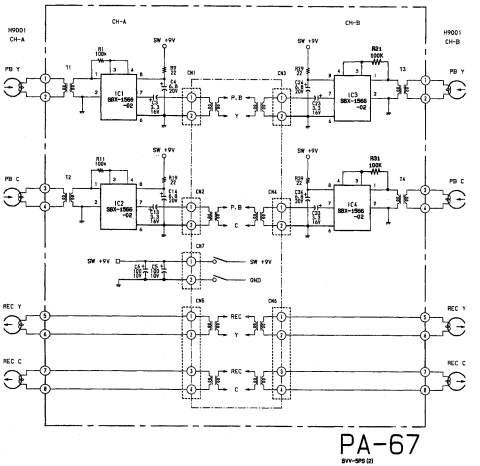
CN-142; 50 PIN/FLEXIBLE BOARD


CN4001
S9001-4 1-1 UNREG +12V IN
S9001-4 1-2 UNREG +12V IN
CN4010
S9001-1 10-1 UNREG +12V IN
S9001-1 10-2 UNREG +12V IN
CN-121, 6002-7 10-4 GND IN
CN-121, 6002-8 10-5 GND IN
NC 10-3 SUB-A
CN4002
CAMERA, 9001-20 2-9 AUDIO LEVEL IND OUT
CAMERA, 9001-31 2-10 AUDIO CH-1 CONTROL IN
CAMERA, 9001-36 2-8 L-RETURN CONTROL IN
CAMERA, 9001-22 2-7 TAPE REMAIN IND1 OUT
CAMERA, 9001-23 2-6 TAPE REMAIN IND2 OUT
CAMERA, 9001-24 2-5 REC/TALLY OUT
CAMERA, 9001-25 2-4 BATTERY IND OUT
CAMERA, 9001-26 2-3 VF H/VTRVL/CAMERA OUT
CAMERA, 9001-27 2-2 VTR H/START/L/STOP IN
CAMERA, 9001-32 2-1 VTR SAVE IN
CN4003
CAMERA, 9001-36 3-1 SHUTTER CLOSE OUT
CAMERA, 9001-37 3-2 COLOR FRAMING PULSE IN
CAMERA, 9001-33 3-3 AUDIO MONITOR OUT
CAMERA, 9001-34 3-4 COMPOSITE SYNC IN
CAMERA, 9001-5 3-5 GND OUT
CAMERA, 9001-6 3-6 GND OUT
CAMERA, 9001-3 3-7 COMBO.+9V IN
NC 3-8 SUB-A
CAMERA, 9001-39 3-9 UNREG +12V OUT
CAMERA, 9001-40 3-10 UNREG +12V OUT
CN4007
C1-73, 1 7-1 L/METAL/N-OXIDE SWITCH IN
C1-73, 2 7-2 L/METAL/N-OXIDE SWITCH IN
CN4008
SW-200, 2 8-1 L/CASSETTE LOCK SWITCH IN
SW-200, 3 8-2 L/CASSETTE LOCK SWITCH IN
CN4009
SE-60, 1 9-1 TENRED RELEASE IN
SE-60, 2 9-2 TENRED RELEASE IN
SE-60, 3 9-3 TENRED VCC OUT
CN4004
SW +9V IN 4-1 DC-DC CON. 912-7
SW +5V IN 4-2 DC-DC CON. 912-4
SW -5V IN 4-3 DC-DC CON. 912-6
AUDIO LEVEL IND IN 4-4 TC-39, 3013-14
AUDIO CH-1 CONTROL OUT 4-5 TC-39, 3013-9
UNREG +12V OUT 4-6 SS-31, 1104-3/SS-31, 1104-4/DR-48, 5301-10
UNREG +12V OUT 4-7 VA-52, 2001-19/TC-39, 3013-1
L-RETURN CONTROL OUT 4-8 SS-31, 1102-6
TAPE REMAIN IND1 4-9 SS-31, 1104-21
TAPE REMAIN IND2 4-10 SS-31, 1103-12
REC/TALLY IN 4-11 SS-31, 1103-10
BATTERY IND IN 4-12 SS-31, 1104-20
VF H/VTRVL/CAMERA IN 4-13 SS-31, 1104-9
VTR H/START/L/STOP OUT 4-14 SS-31, 1103-13
VTR SAVE OUT 4-15 SS-31, 1102-1
SHUTTER CLOSE IN 4-16 SS-31, 1104-27
COLOR FRAMING PULSE OUT 4-17 TC-39, 3012-16
AUDIO MONITOR IN 4-18 VA-52, 2001-4
L/VIDEO/AUDIO PB IN 4-19 SS-31, 1103-8
TENRED RELEASE OUT 4-20 SS-31, 1102-8
SW -9V IN 4-21 DC-DC CON. 912-5
L/CASSE./LOCK SWITCH OUT 4-22 SS-31, 1102-9
L/METAL/N-OXIDE SWITCH OUT 4-23 SS-31, 1102-27/VA-52, 2001-9/TC-39, 3013-18
COMBO.+9V OUT 4-24 VA-52, 2001-24
CN4006
GND OUT 6-1 AU-73, 8005-6
UNREG +12V OUT 6-2 AU-73, 8005-1
L/METAL/N-OXIDE SWITCH OUT 6-3 AU-73, 8005-10
SW +9V OUT 6-4 AU-73, 8005-3
L/VIDEO/AUDIO PB OUT 6-5 AU-73, 8005-7
SW -5V OUT 6-6 AU-73, 8005-5
SW +9V OUT 6-7 AU-73, 8005-2
SW +5V OUT 6-8 AU-73, 8005-4
CN4005
COMPOSITE SYNC OUT 1Ω 5-1 VA-52, 2005-2
COMPOSITE SYNC OUT 1Ω 5-2 VA-52, 2005-1
COMPOSITE SYNC OUT 1Ω 5-3 TC-39, 3001-6
COMPOSITE SYNC OUT Ω 5-4 TC-39, 3001-5
COMPOSITE SYNC OUT 1Ω 5-5 SS-31, 1203-1
COMPOSITE SYNC OUT 1Ω 5-6 SS-31, 1203-2
CN-142
1-522-625-11 (1)
BW-S
RM-MPB

FL-38; FLEXIBLE HARNESS BOARD



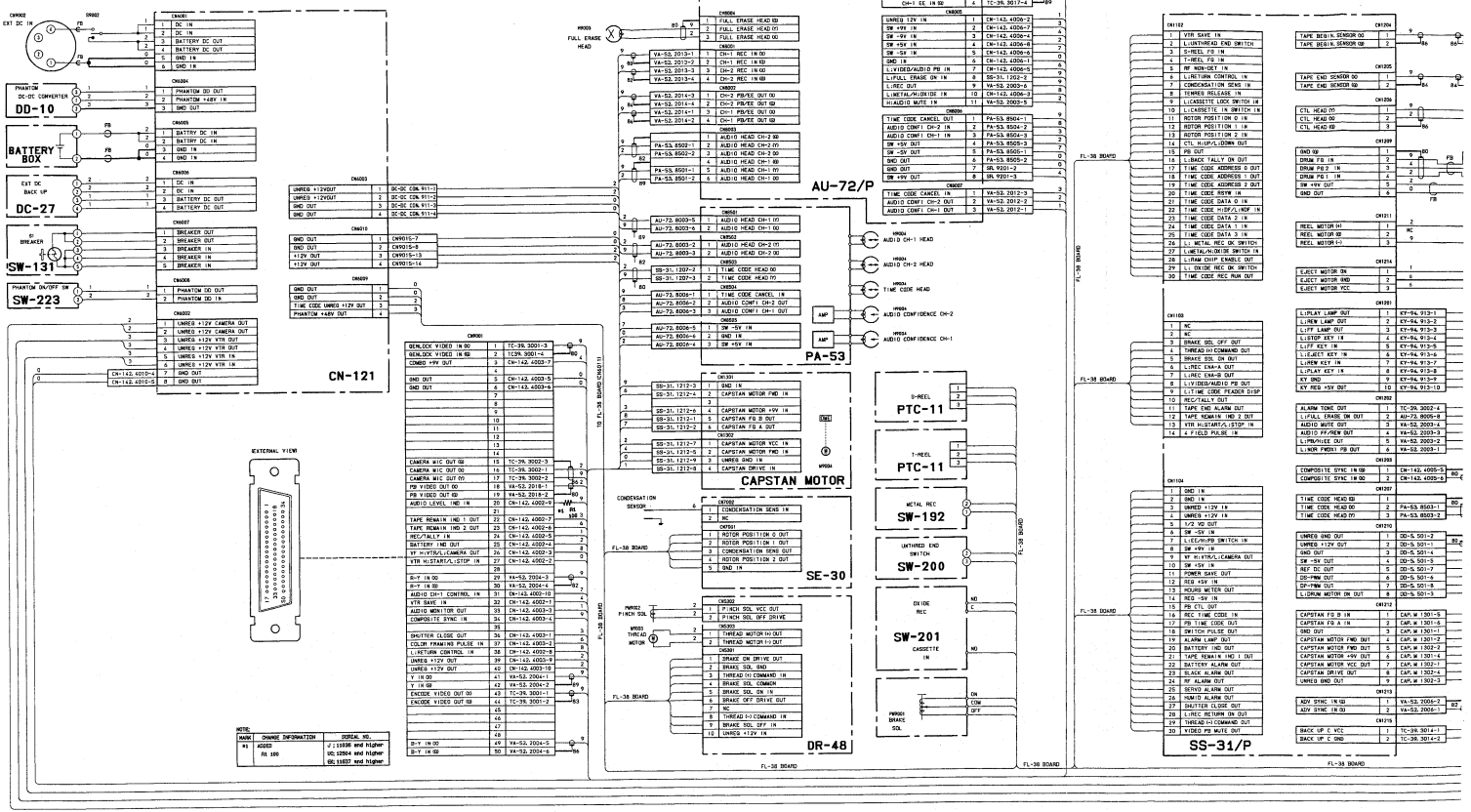
PA-67; REC/PB AMPLIFIER

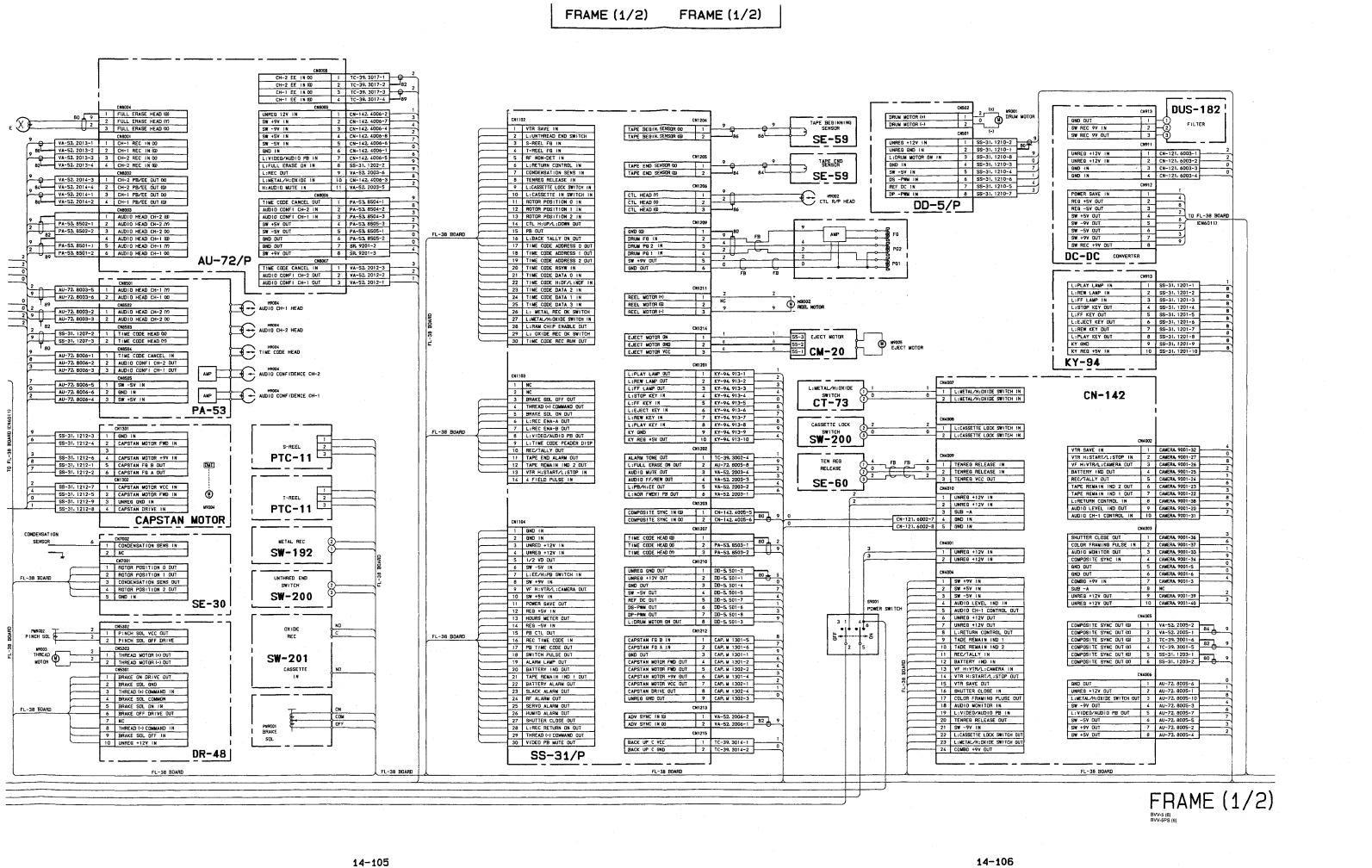


FRAME (1/2)

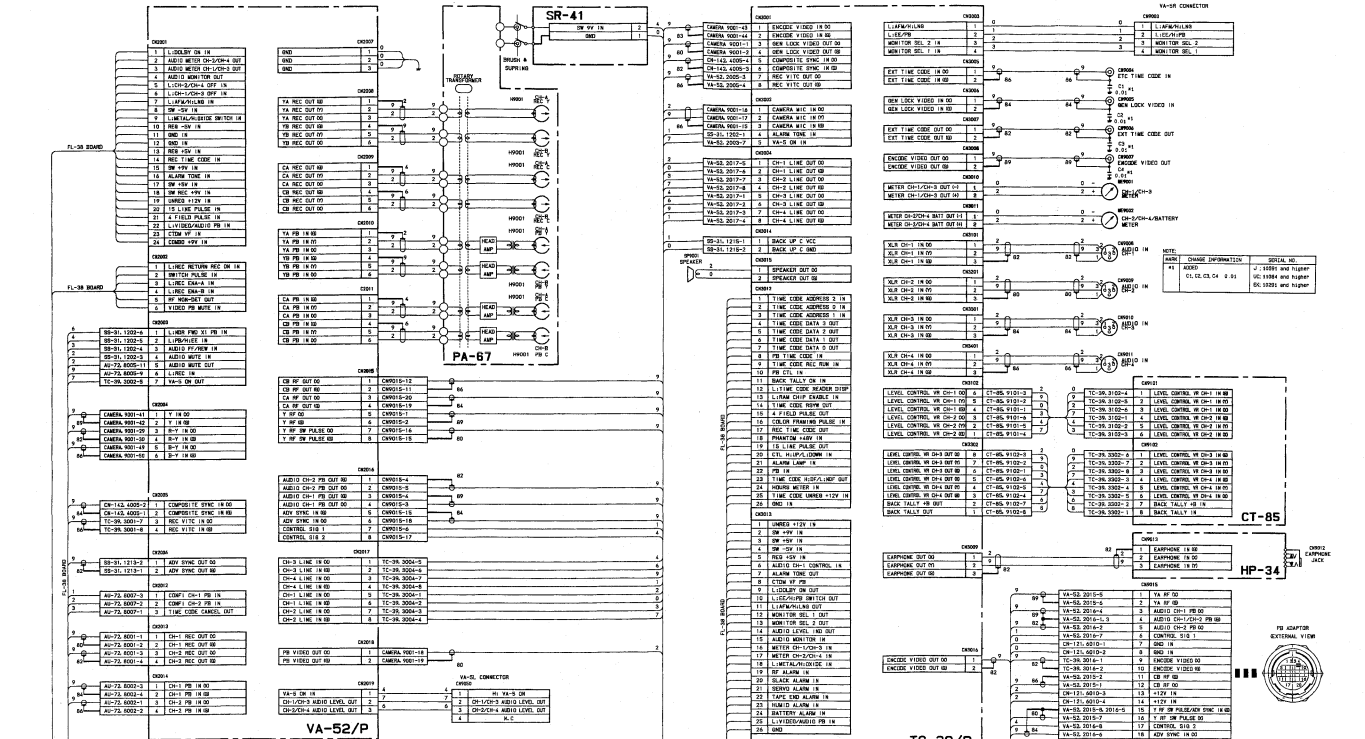
FRAME (1/2)

FRAME (1/2)




FRAME (1/2)
FRAME (1/2)
AU-72/P
PA-53
CAPSTAN MOTOR
DR-48
SE-30
PTC-11
PTC-11
SW-192
SW-200
SW-201
SW-200
SS-31/P
SE-59
SE-59
DD-5/P
CM-20
CT-73
SW-200
SE-60
DUS-182
DC-DC
KY-94
CN-142
FRAME (1/2)
14-105
14-106

FRAME (2/2)


SR-41
PA-67
VA-52/P
TC-39/P
CT-85
HP-34
FRAME (2/2)
FL-38 BOARD
FL-39 BOARD
FL-36 BOARD
VA-SL CONNECTOR
VA-SR CONNECTOR
14-107
14-108

SECTION 15
PRINTED WIRING BOARDS

VA-52P; VIDEO SYSTEM
AFM SYSTEM, DOLBY PROCESS

S/N 10661 to 10880

VA-52/52P

Ref. No.	Type	Pin No. +5V	+5V	GND	−5V
IC 1	CXA1046M	24		15	
IC 2	CXA1039M	*		6	
IC 3	CXA1041M	15,17	13	19	
IC 4	BH1806	2		3,7	*
IC 5	BH1806	2		3,7	*
IC 101	CXA1046M	24		15	
IC 102	CXA1039M	*		6	
IC 103	CXA1041M	15,17	13	19	
IC 104	BH1806	2		3,7	*
IC 105	BH1806	2		3,7	*
IC 201	BH1804	7	20	1	
IC 202	TC4052BF		16	8	7
IC 203	BH1803	*		1	*
IC 204	SN74LS221NS		16	8	
IC 205	SN74LS221NS		16	8	
IC 207	TC4011BF		14	7	
IC 208	TC74HC221F		16	8	
IC 209	TC74HC00F		14	7	
IC 210	TC74HC86F		14	7	
IC 211	TC74HC04F		14	7	
IC 212	TC74HC221F		16	8	
IC 301	TC4052BF		*	8	*
IC 302	TC4052BF		*	8	*
IC 303	TC9040J1BF		*	7	
IC 304	BH1805		*	24	*
IC 305	TC4053BF		*	8	7
IC 306	BH1807	*	*	1	
IC 401	NJM78L05A			2	
IC 501	TC4538BF		16	8	
IC 502	TC4001BF		14	7	
IC 601	TC4053BF		16	8	7
IC 602	BH1417		15	7	
IC 603	AN6391NS		9	2,16	
IC 604	AN6391NS		9	2,16	
IC 606	BH2402	*		*	
IC 607	BH1809		*	21	20
IC 608	TC4001BF		*	7	
IC 609	NJM78L05A			2	

NOTE: *·····REFER TO SCHEMATIC

VA-52/52P (1-622-624-14)

CN1 E-1 C M-1 S
CN2 F-1 C N-1 S
CN3 C-2 S K-2 S
CN4 F-6 C K-2 S
CN5 N-6 S E-6 C
CN6 M-6 S C-1 C K-1 S
CN7 E-1 C M-1 S
CN8 E-1 C M-1 S
CN9 D-2 C L-2 S
CN10 E-1 C M-1 S
CN11 F-1 C N-1 S
CN12 B-1 C J-1 S
CN13 A-1 C H-1 S
CN14 C-1 C K-1 S
CN15 G-3 C P-3 S
CN16 C-1 C K-1 S
CN17 A-3 C H-4 C
CN18 F-4 C N-4 S
CN19 B-1 C J-1 S
CN20 E-4 C M-4 S
CN21 D-4 C L-4 S
D1 C-4 C
D302 M-6 S
D301 N-3 S
D302 E-3 C
D401 E-1 C
D402 D-1 C
D603 J-6 S
D604 K-2 S
D605 K-5 S
D606 K-5 S
D607 B-2 C
D608 C-4 C K-4 S
D609 A-6 C
D610 B-6 C
D620 J-4 S
D621 K-4 S
E1 E-3 C M-3 S
E101 E-3 C M-3 S
E201 G-7 C P-7 S
E301 G-6 C P-6 S
E601 A-6 C H-6 S
E602 C-2 C K-2 S
FB4 M-5 S
FB11 E-3 C
FB104 L-5 S
FB111 D-3 C
FB208 L-7 S
FB209 L-7 S
FB210 M-7 S
FL4 F-5 C
FL5 E-4 C M-5 S
FL104 D-6 C
FL105 D-5 C L-5 S
FL202 F-6 C
FL203 G-6 C
FL204 E-6 C
FL601 A-5 C
FL602 C-5 C
FL603 D-6 C
FL604 C-6 C
FL605 A-4 C
FL606 A-3 C
FL607 B-2 C
FL608 A-2 C
IC1 F-5 C
IC2 E-5 C
IC3 E-4 C
IC4 E-3 C M-3 S
IC5 E-3 C M-3 S
IC101 E-5 C
IC102 D-5 C
IC103 D-4 C
IC104 F-3 C L-3 S
IC105 D-3 C L-3 S
IC201 F-7 C N-7 S
IC202 N-7 S
IC203 E-7 C M-7 S
IC204 D-6 C
IC205 D-6 C
IC207 F-6 C
IC208 L-6 S
IC209 P-5 S
IC210 M-7 S
IC211 M-7 S
IC212 N-4 S
IC301 F-2 C
IC302 F-3 C
IC303 E-3 C
IC304 F-4 C N-4 S
IC305 N-4 S
IC306 G-5 C P-5 S
IC401 E-1 C M-1 S
IC501 D-3 C
IC502 L-3 S
IC601 A-5 C
IC602 B-4 C J-4 S
IC603 B-6 C
IC604 C-6 C
IC605 J-5 S
IC606 A-2 C H-2 S
IC607 C-3 C K-3 S
IC608 C-2 C
IC609 C-4 C K-4 S
Q1 D-4 C
Q3 M-5 S
Q4 N-5 S
Q5 E-4 C
Q6 E-4 C
Q7 E-4 C
Q8 N-4 S
Q10 M-4 S
Q11 M-4 S
Q12 M-4 S
Q13 N-4 S
Q14 M-4 S
Q21 M-3 S
Q22 M-3 S
Q23 M-3 S
Q24 M-2 S
Q25 M-2 S
Q26 M-3 S
Q27 M-3 S
Q28 M-3 S
Q29 M-2 S
Q39 M-2 S
Q31 E-4 C
Q32 N-6 S
Q33 N-4 S
Q34 M-5 S
Q35 M-5 S
Q102 L-5 S
Q103 L-5 S
Q104 M-5 S
Q105 D-4 C
Q106 D-4 C
Q107 D-4 C
Q108 M-5 S
Q110 M-4 S
Q111 L-4 S
Q112 L-4 S
Q113 M-4 S
Q114 L-4 S
Q115 L-4 S
Q116 K-4 S
Q117 L-5 S
Q118 L-2 S
Q119 L-2 S
Q121 L-3 S
Q122 L-3 S
Q123 L-3 S
Q124 L-2 S
Q125 L-2 S
Q126 M-3 S
Q127 M-3 S
Q128 M-3 S
Q129 L-2 S
Q130 L-2 S
Q131 D-4 C
Q133 D-5 C
Q201 F-5 C
Q202 N-6 S
Q203 N-5 S
Q204 P-7 S
Q205 N-6 S
Q206 L-6 S
Q207 M-7 S
Q208 M-6 S
Q209 M-6 S
Q210 M-6 S
Q211 E-6 C
Q212 E-7 C
Q213 M-6 S
Q216 M-6 S
Q217 L-7 C
Q218 N-5 S
Q219 P-5 S
Q220 L-3 S
Q221 N-7 S
Q222 N-6 S
Q223 N-7 S
Q224 N-7 S
Q225 P-7 S
Q226 P-7 S
Q227 N-7 S
Q228 N-7 S
Q229 P-5 S
Q230 P-5 S
Q231 K-7 S
Q232 P-6 S
Q233 L-7 S
Q234 K-7 S
Q235 K-7 S
Q241 M-7 S
Q242 N-6 S
Q243 F-6 C
Q244 N-6 S
Q245 N-6 S
Q246 N-6 S
Q247 N-7 S
Q248 N-4 S
Q301 M-1 S
Q302 E-2 C
Q303 M-2 S
Q304 N-1 S
Q305 F-2 C
Q306 N-2 S
Q307 N-1 S
Q308 F-2 C
Q309 N-2 S
Q310 N-1 S
Q311 F-2 C
Q312 N-2 S
Q313 N-3 S
Q315 N-3 S
Q316 N-2 S
Q317 M-2 S
Q318 M-3 S
Q319 F-3 C
Q320 N-3 S
Q322 N-3 S
Q323 N-3 S
Q324 N-3 S
Q325 E-3 C
Q326 P-3 S
Q327 E-3 C
Q328 D-2 C
Q329 P-3 S
Q401 M-1 S
Q403 L-1 S
Q404 D-1 C
Q405 M-1 S
Q406 M-1 S
Q407 E-1 C
Q408 E-1 C
Q501 L-3 S
Q502 L-3 S
Q603 K-3 S
Q604 K-5 S
Q606 K-4 S
Q607 K-4 S
Q608 K-2 S
Q609 K-2 S
Q610 K-3 S
Q611 K-5 S
Q612 L-5 S
Q613 J-3 S
Q614 K-5 S
Q615 C-1 C
Q616 K-4 S
Q617 K-2 S
Q618 J-4 S
Q619 J-4 S
Q620 K-3 S
RV1 E-5 C M-5 S
RV2 E-6 C
RV3 E-5 C M-5 S
RV4 E-5 C M-5 S
RV5 F-5 C N-5 S
RV6 F-5 C N-5 S
RV7 E-5 C M-5 S
RV8 F-4 C
RV9 F-4 C
RV10 E-5 C M-5 S
RV11 E-4 C
RV12 F-4 C
RV13 E-3 C
RV14 E-3 C
RV15 E-3 C
RV16 E-3 C
RV17 E-2 C M-2 S
RV18 E-2 C M-2 S
RV19 E-2 C M-2 S
RV20 E-2 C M-2 S
RV21 E-3 C
RV22 E-3 C
RV23 F-5 C N-5 S
RV24 F-4 C
RV102 D-6 C
RV103 D-5 C L-5 S
RV104 D-5 C L-5 S
RV105 E-5 C M-5 S
RV106 E-5 C M-5 S
RV107 D-5 C L-5 S
RV108 E-4 C
RV109 E-4 C
RV110 D-5 C L-5 S
RV111 E-4 C
RV112 E-4 C
RV113 D-3 C
RV114 D-3 C
RV115 E-3 C
RV116 E-3 C
RV117 D-2 C L-2 S
RV118 D-2 C L-2 S
RV119 E-2 C M-2 S
RV120 D-2 C L-2 S
RV121 D-3 C
RV122 D-3 C
RV124 D-3 C
RV201 F-7 C
RV202 F-6 C
RV203 F-7 C
RV204 F-7 C
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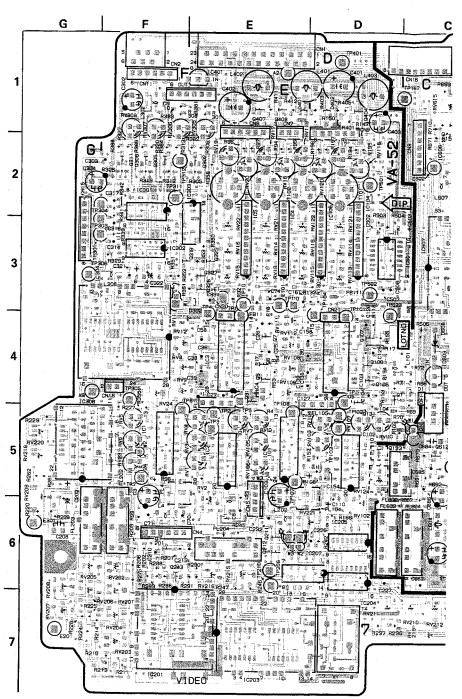
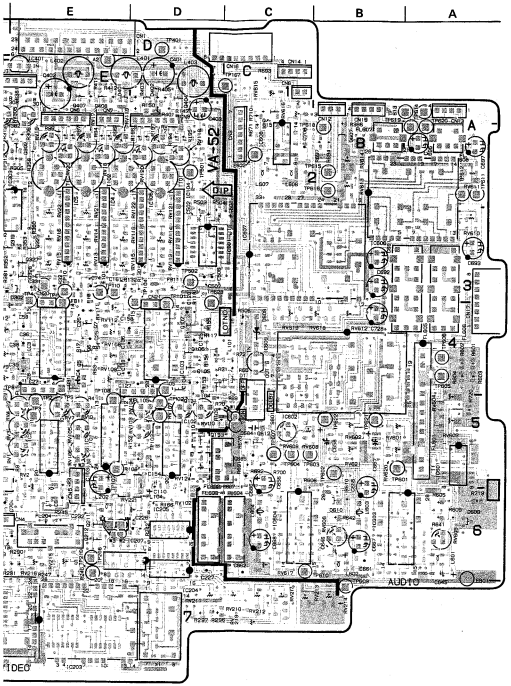
RV206 G-7 C
RV207 G-7 C
RV208 G-6 C
RV209 G-6 C
RV210 C-7 C
RV211 D-7 C
RV212 C-7 C
RV213 G-7 C
RV214 M-7 C
RV215 E-6 C
RV216 E-6 C
RV217 G-7 C
RV218 G-5 C
RV219 G-7 C
RV220 G-5 C
RV221 D-6 C
RV305 E-1 C M-1 S
RV306 F-1 C N-1 S
RV307 F-1 C N-1 S
RV308 F-1 C N-1 S
RV601 B-5 C
RV602 B-5 C
RV603 A-3 C
RV604 A-5 C
RV605 A-6 C H-6 S
RV606 B-6 C J-6 S
RV608 C-5 C
RV609 C-5 C K-5 S
RV610 A-3 C
RV611 A-2 C
RV612 B-4 C
RV613 B-2 C
RV614 B-2 C
RV615 C-1 C
RV616 C-1 C
RV617 C-6 C
RV618 B-4 C
RV619 C-4 C
RV620 B-5 C
RV621 B-5 C
S601 C-5 C
T1 E-2 C
T2 E-2 C
T101 D-2 C
T102 E-2 C
TP1 E-4 C M-4 S
TP2 F-5 C M-5 S
TP3 F-5 C M-5 S
TP4 E-3 C M-4 S
TP5 E-4 C M-4 S
TP7 F-5 C N-5 S
TP8 F-5 C M-5 S
TP10 E-3 C M-3 S
TP101 D-4 C L-4 S
TP102 D-4 C L-5 S
TP103 D-5 C L-5 S
TP104 D-4 C L-4 S
TP105 D-4 C L-5 S
TP107 E-5 C M-5 S
TP108 E-5 C M-5 S
TP110 F-3 C M-3 S
TP208 E-6 C M-6 S
TP210 E-6 C M-6 S
TP301 M-3 C P-3 S
TP303 G-3 C P-3 S
TP304 G-2 C P-2 S
TP305 F-4 C N-4 S
TP306 F-2 C N-2 S
TP311 F-2 C N-2 S
TP312 F-2 C N-2 S
TP401 B-1 C L-1 S
TP501 D-2 C J-2 S
TP502 D-3 C J-3 S
TP601 B-5 C J-5 S
TP602 B-5 C J-5 S
TP603 B-5 C J-5 S
TP604 C-5 C K-5 S
TP605 H-4 C
TP606 A-4 C H-4 S
TP607 C-5 C K-5 S
TP609 P-7 C J-7 S
TP610 C-6 C K-6 S
TP611 A-2 C H-2 S
TP612 A-2 C H-2 S
TP613 B-1 C J-1 S
TP614 A-1 C H-1 S
TP615 B-2 C J-2 S
TP616 B-2 C J-2 S
TP617 C-1 C K-1 S
TP618 B-2 C J-2 S
TP619 A-2 C H-2 S
TP620 A-2 C H-2 S
TP621 B-5 C J-5 S
TP622 B-5 C J-5 S
TP623 D-4 C L-4 S
X1 D-7 C



15-1 (a)

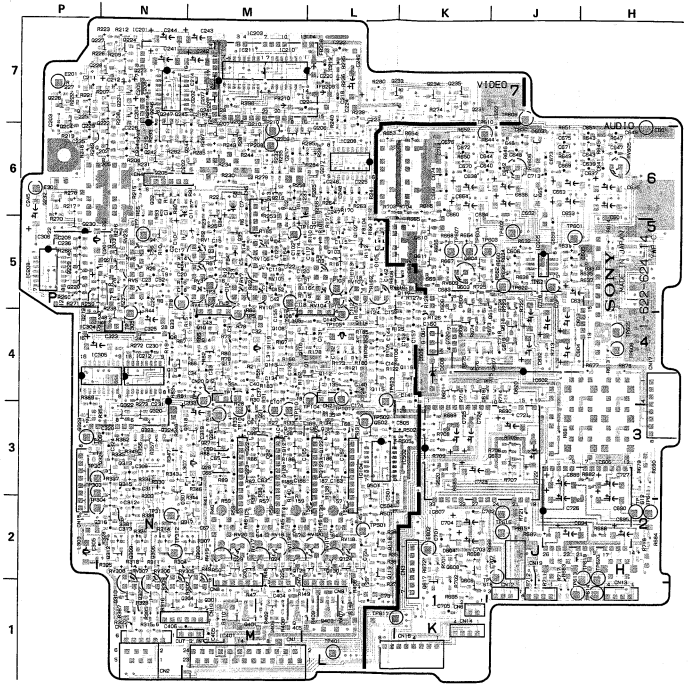
15-2 (a)

to 10880



VA-52 -COMPONENT SIDE-

1-622-624-14
BVV-5 ---- VA-52
BVV-5PS --- VA-52P



VA-52 -SOLDERING SIDE-

1-622-624-14
BVV-5 ---- VA-52
BVV-5PS --- VA-52P

VA-52P; VIDEO SYSTEM
AFM SYSTEM, DOLBY PROCESS

S/N 10881 to 12992

VA-52/52P

Ref. No.	Type	Pin No. +9V	+5V	GND	−5V
IC 1	CXA1040M	24		15	
IC 2	CXA1039M	*		6	
IC 3	CXA1041M	15,17	13	19	
IC 4	BH1806	2		5,7	*
IC 5	BH1806	2		5,7	*
IC 101	CXA1040M	24		15	
IC 102	CXA1039M	*		6	
IC 103	CXA1041M	15,17	13	19	
IC 104	BH1806	2		5,7	*
IC 105	BH1806	2		5,7	*
IC 201	BH1804	7	20	1	
IC 202	TC4052BF		16	8	7
IC 203	BH1803	*		1	*
IC 204	SN74LS221NS		16	8	
IC 205	SN74LS221NS		16	8	
IC 207	TC4W02F		14	7	
IC 208	TC74HC221F		16	8	
IC 209	TC74HC00F		14	7	
IC 210	TC74HC00F		14	7	
IC 211	TC74HC04F		14	7	
IC 212	TC74HC221F		16	8	
IC 301	TC4052BF		*	8	*
IC 302	TC4052BF		*	8	*
IC 303	TC5940138F		*	7	
IC 304	BH1805		*	24	*
IC 305	TC4053BF		*	8	7
IC 306	BH1807	*	*	1	
IC 401	NJM78L05A			2	
IC 501	TC4538BF		16	8	
IC 502	TC4001BF		14	7	
IC 601	TC4053BF		16	8	7
IC 602	BH1417		15	7	
IC 603	AN6391NS		9	2,16	
IC 604	AN6391NS		9	2,16	
IC 606	BH2402	*		*	
IC 607	BH1809		*	21	20
IC 608	TC4001BF		*	7	
IC 609	NJM78L05A			2	

NOTE; * ------ REFER TO SCHEMATIC

VA-52/52P (1-622-624-15)

CN1 E-1 C, M-1 S
CN2 F-1 C, N-1 S
CN3 C-2 C, K-2 S
CN4 F-6 C, N-6 S
CN5 E-6 C, M-6 S
CN6 C-1 C, K-1 S
CN7 E-1 C, M-1 S
CN8 E-1 C, M-1 S
CN9 D-2 C, L-2 S
CN10 E-1 C, M-1 S
CN11 E-1 C, N-1 S
CN12 B-1 C, J-1 S
CN13 A-1 C, H-1 S
CN14 C-1 C, K-1 S
CN15 G-3 C, P-3 S
CN16 C-1 C, K-1 S
CN17 A-3 C, H-4 S
CN18 F-4 C, N-4 S
CN19 B-1 C, J-1 S
CN20 E-4 C, M-4 S
CN21 E-4 C, L-4 S

D1 C-4 C
D202 M-6 S
D301 N-3 S
D302 E-3 C
D401 E-1 C
D402 D-1 C
D603 J-6 S
D604 K-2 S
D605 K-5 S
D606 K-5 S
D607 B-2 C
D608 C-4 C, K-4 S
D609 A-6 C
D610 B-6 C
D620 J-4 S
D621 K-4 S

E1 E-3 C, M-3 S
E101 E-3 C, M-3 S
E201 G-7 C, P-7 S
E301 G-6 C, P-6 S
E601 A-6 C, H-6 S
E602 C-2 C, K-2 S

FB4 M-5 S
FB11 E-3 C
FB104 L-5 S
FB111 D-3 C
FB208 L-7 S
FB209 L-7 S
FB210 M-7 S

FL4 F-5 C
FL5 E-4 C, M-5 S
FL104 D-5 C
FL105 D-5 C, L-5 S

FL202 F-6 C
FL203 G-6 C
FL204 E-6 C
FL601 A-5 C
FL602 C-5 C
FL603 D-6 C
FL604 C-6 C
FL605 A-3 C
FL606 A-3 C
FL607 B-2 C
FL608 A-2 C

IC1 F-5 C
IC2 E-5 C
IC3 E-6 C
IC4 E-3 C, M-3 S
IC5 E-3 C, M-3 S
IC101 E-5 C
IC102 B-2 C
IC103 D-4 C
IC104 D-3 C, J-3 S
IC105 D-3 C, L-3 S
IC201 F-7 C
IC202 N-7 S
IC203 E-7 C, M-7 S
IC204 E-6 C
IC205 D-6 C
IC207 D-6 C
IC208 F-6 C
IC209 P-5 S
IC210 M-7 S
IC211 B-7 C
IC212 N-4 S
IC301 F-2 C
IC302 F-3 C
IC303 E-3 C
IC304 F-4 C, N-4 S
IC305 N-4 S
IC306 G-3 C, P-5 S
IC401 E-1 C, M-1 S
IC501 D-3 C
IC502 L-3 S
IC601 A-5 C
IC602 B-4 C, J-4 S
IC603 B-6 C
IC604 C-6 C
IC605 J-5 S
IC606 A-2 C, H-2 S
IC607 C-3 C, K-3 S
IC608 C-2 C
IC609 C-2 C, K-4 S

Q1 D-4 C
Q3 M-5 S
Q4 N-5 S
Q5 E-4 C
Q6 E-4 C
Q7 E-4 C
Q8 N-4 S
Q10 M-4 S
Q11 M-4 S
Q12 M-4 S
Q13 N-4 S
Q14 M-4 S
Q21 M-3 S
Q22 M-3 S
Q23 M-3 S
Q24 M-2 S
Q25 M-2 S
Q26 M-3 S
Q27 M-3 S
Q28 M-3 S
Q29 M-2 S
Q30 M-2 S
Q31 E-4 C

Q32 N-6 S
Q33 N-4 S
Q34 M-5 S
Q35 M-5 S
Q102 L-5 S
Q103 L-5 S
Q104 M-5 S
Q105 D-4 C
Q106 D-4 C
Q107 D-4 C
Q108 M-4 S
Q110 M-4 S
Q111 L-4 S
Q112 L-4 S
Q113 M-4 S
Q114 L-4 S
Q115 L-4 S
Q116 K-4 S
Q117 L-5 S
Q118 L-2 S
Q119 L-2 S
Q121 L-3 S
Q122 L-3 S
Q123 L-3 S
Q124 L-2 S
Q125 L-2 S
Q126 M-3 S
Q127 M-3 S
Q128 M-3 S
Q129 L-2 S
Q130 L-2 S
Q131 D-4 C
Q133 D-5 C
Q201 F-6 C
Q202 N-6 S
Q203 N-5 S
Q204 P-7 S
Q205 N-6 S
Q206 L-6 S
Q207 M-6 S
Q208 M-6 S
Q209 M-6 S
Q210 M-6 S
Q211 E-6 C
Q212 E-6 C
Q213 M-4 S
Q216 M-6 S
Q217 L-6 S
Q218 N-5 S
Q219 P-5 S
Q220 P-5 S
Q221 N-7 S
Q222 N-6 S
Q223 N-7 S
Q224 N-7 S
Q225 P-7 S
Q226 P-7 S
Q227 N-7 S
Q228 N-7 S
Q229 P-5 S
Q230 P-5 S
Q231 K-7 S
Q232 P-6 S
Q233 L-7 S
Q234 K-7 S
Q235 M-7 S
Q241 M-7 S
Q242 N-6 S
Q243 F-6 C
Q244 N-6 S
Q245 N-7 S
Q246 N-6 S
Q247 N-7 S
Q248 N-4 S
Q301 M-1 S
Q302 E-2 C
Q303 M-2 S
Q304 N-1 S
Q305 F-2 C
Q306 N-2 S
Q307 N-1 S
Q308 F-2 C
Q309 N-2 S
Q310 N-1 S
Q311 F-2 C
Q312 N-2 S
Q313 N-3 S
Q315 N-3 S

Q316 N-2 S
Q317 M-2 S
Q318 N-3 S
Q319 F-3 C
Q320 N-3 S
Q322 N-3 S
Q323 N-3 S
Q324 N-3 S
Q325 P-3 C
Q326 P-3 S
Q327 E-3 C
Q328 E-3 C
Q329 P-3 S
Q401 M-1 S
Q403 L-1 S
Q404 D-1 C
Q405 M-1 S
Q406 M-1 S
Q407 E-1 C
Q408 E-1 C
Q501 L-3 S
Q502 L-3 S
Q550 M-2 S
Q551 M-4 S
Q552 M-3 S
Q603 K-5 S
Q604 K-5 S
Q606 K-4 S
Q607 K-4 S
Q608 K-2 S
Q609 K-2 S
Q610 K-5 S
Q611 K-5 S
Q612 C-5 C
Q613 J-3 S
Q614 K-5 S
Q615 C-1 C
Q616 K-4 S
Q617 K-2 S
Q618 J-4 S
Q619 K-4 S
Q620 K-3 S

RV1 E-5 C, M-5 S
RV2 E-6 C
RV3 E-5 C, M-5 S
RV4 E-5 C, M-5 S
RV5 F-5 C, N-5 S
RV6 F-5 C, N-5 S
RV7 E-5 C, M-5 S
RV8 F-4 C
RV9 F-4 C
RV10 E-5 C, M-5 S
RV11 E-4 C
RV12 F-4 C
RV13 E-3 C
RV14 E-3 C
RV15 E-3 C
RV16 E-3 C
RV17 E-2 C, M-2 S
RV18 E-2 C, M-2 S
RV19 E-2 C, M-2 S
RV20 E-2 C, M-2 S
RV21 E-3 C
RV22 E-3 C
RV23 F-5 C, N-5 S
RV24 F-4 C
RV102 D-6 C
RV103 D-5 C, L-5 S
RV104 D-5 C, L-5 S
RV105 E-5 C, M-5 S
RV106 E-5 C, M-5 S

RV107 D-5 C, L-5 S
RV108 E-4 C
RV109 E-4 C
RV110 D-5 C, L-5 S
RV111 E-4 C
RV112 E-4 C
RV113 D-3 C
RV114 D-3 C
RV115 F-3 C
RV116 E-3 C
RV117 D-2 C, L-2 S
RV118 D-2 C, L-2 S
RV119 E-2 C, M-2 S
RV120 D-2 C, L-2 S
RV121 D-3 C
RV122 E-3 C
RV124 D-3 C
RV201 F-7 C
RV202 F-6 C
RV203 F-7 C
RV204 F-7 C
RV205 G-6 C
RV206 G-7 C
RV207 G-7 C
RV208 G-6 C
RV209 G-6 C
RV210 C-7 C
RV211 D-7 C
RV212 C-7 C
RV213 C-7 C
RV214 B-7 C
RV215 E-6 C
RV216 E-6 C
RV217 C-7 C
RV218 G-5 C
RV219 C-7 C
RV220 G-5 C
RV221 D-6 C
RV305 E-1 C, M-1 S
RV306 F-1 C, N-1 S
RV307 F-1 C, N-1 S
RV308 F-1 C, N-1 S
RV601 B-5 C
RV602 B-5 C
RV603 A-5 C
RV604 A-5 C
RV605 A-6 C, H-6 S
RV606 B-6 C, J-6 S
RV608 C-5 C
RV609 C-5 C, K-5 S
RV610 A-3 C
RV611 A-2 C
RV612 B-4 C
RV613 B-2 C
RV614 B-2 C
RV615 C-1 C
RV616 C-1 C
RV618 B-4 C
RV619 C-4 C
RV620 B-5 C
RV621 B-5 C

S601 C-5 C

T1 E-2 C
T2 E-2 C
T101 D-2 C
T102 E-2 C

TP1 E-4 C, M-4 S
TP2 F-5 C, M-5 S
TP3 F-5 C, M-5 S

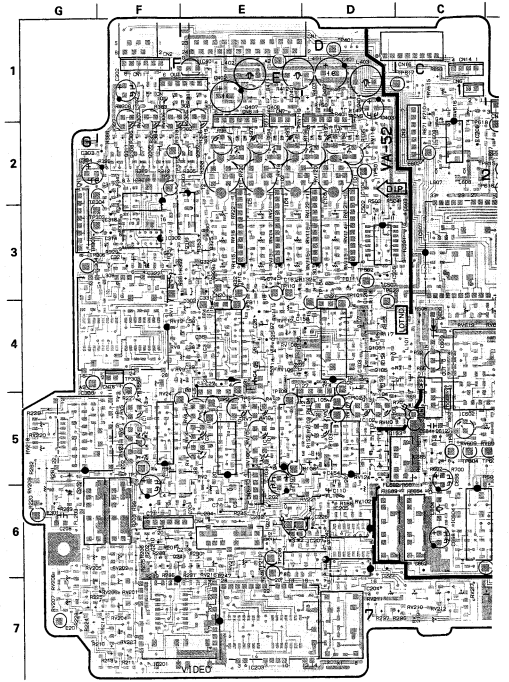
TP4 E-4 C, M-4 S
TP5 E-4 C, M-4 S
TP7 F-5 C, N-5 S
TP8 F-5 C, N-5 S
TP10 E-3 C, M-3 S
TP101 D-4 C, L-4 S
TP102 D-5 C, L-5 S
TP103 D-3 C, L-5 S
TP104 D-4 C, L-4 S
TP105 D-4 C, L-5 S
TP107 E-5 C, M-5 S
TP108 E-5 C, M-5 S
TP110 E-3 C, M-3 S
TP208 E-6 C, M-6 S
TP210 E-6 C, M-6 S
TP301 G-3 C, P-3 S
TP303 G-3 C, P-3 S
TP304 G-2 C, P-2 S
TP305 F-4 C, N-4 S
TP306 G-3 C, P-3 S
TP311 F-2 C, N-2 S
TP312 F-2 C, N-2 S
TP401 D-1 C, L-1 S
TP501 D-2 C, L-2 S
TP502 D-3 C, L-3 S
TP601 B-5 C, J-5 S
TP602 B-5 C, J-5 S
TP603 B-5 C, J-5 S
TP604 C-5 C, K-5 S
TP605 A-4 C, H-4 S
TP606 A-4 C, H-4 S
TP607 C-5 C, K-5 S
TP609 B-7 C, J-7 S
TP610 C-6 C, K-6 S
TP611 A-2 C, H-2 S
TP612 A-2 C, H-2 S
TP613 B-1 C, J-1 S
TP614 A-1 C, H-1 S
TP615 B-2 C, J-2 S
TP616 B-2 C, J-2 S
TP617 C-1 C, K-1 S
TP618 B-2 C, J-2 S
TP619 A-2 C, H-2 S

TP620 A-2 C, H-2 S
TP621 B-5 C, J-5 S
TP622 B-5 C, J-5 S
TP623 D-4 C, L-4 S

X1 D-7 C

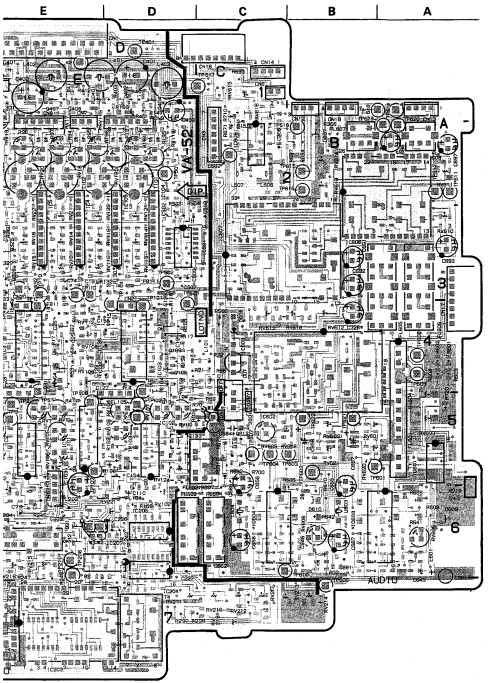
- C; COMPONENT SIDE
- S; SOLDERING SIDE

15-1 (b)

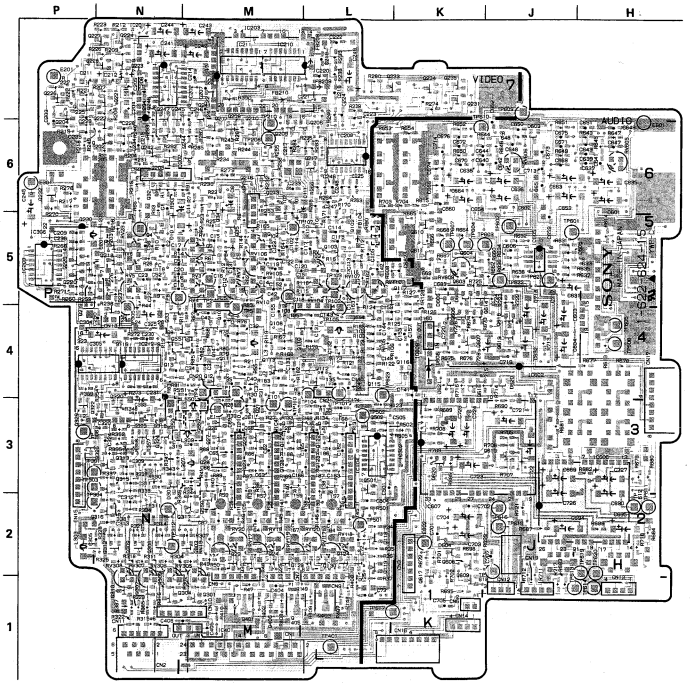


15-2 (b)

to 12992



VA-52 -COMPONENT SIDE-
1-622-624-15
BVV-5 ---- VA-52
BVV-5PS --- VA-52P



VA-52 -SOLDERING SIDE-
1-622-624-15
BVV-5 ---- VA-52
BVV-5PS --- VA-52P

VA-52P; VIDEO SYSTEM
AFM SYSTEM, DOLBY PROCESS

S/N 12993 and higher

VA-52

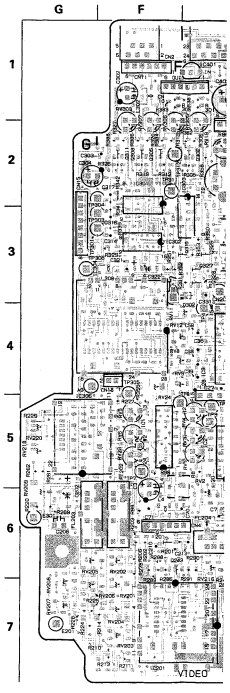
Ref. No.	Type	Pin No.			
		+9V	+5V	GND	-5V
IC 1	CXA1040M	24		15	
IC 2	CXA1039M	*		6	
IC 3	CXA1041M	15,17	13	19	
IC 4	BH1806A	2		5,7	*
IC 5	BH1806A	2		5,7	*
IC 101	CXA1040M	24		15	
IC 102	CXA1039M	*		6	
IC 103	CXA1041M	15,17	13	19	
IC 104	BH1806A	2		5,7	*
IC 105	BH1806A	2		5,7	*
IC 201	BH1604	7	20	1	
IC 202	TC4052BF		16	8	7
IC 203	BH1803	*		1	*
IC 204	TC74HC221F		16	8	
IC 205	TC74HC221F		16	8	
IC 207	TC4049BDF		14	7	
IC 208	TC74HC221F		16	8	
IC 209	TC74HC30F		14	7	
IC 210	TC74HC20F		14	7	
IC 211	TC74HC04F		14	7	
IC 212	TC74HC221F		16	8	
IC 301	TC4053BF		*	8	*
IC 302	TC4052BF		*	8	*
IC 303	TC5041SBF		*	7	
IC 304	BH1805		*	24	*
IC 305	TC4053BF		*	8	7
IC 306	BH1807	*	*	1	
IC 401	NJM78L05A			2	
IC 501	TC4538BF		16	8	
IC 502	TC4081BF		14	7	
IC 503	TC4571F		6	3	
IC 504	TC4571F		6	3	
IC 601	TC4053BF		16	8	7
IC 602	BH1417		15	7	
IC 603	AN6391NS		9	2,16	
IC 604	AN6391NS		9	2,16	
IC 606	BH2402	*		*	
IC 607	BH1809		*	21	20
IC 608	TC4001BF		*	7	
IC 609	NJM78L05A			2	

NOTE; * ····· REFER TO SCHEMATIC

VA-52/52P (1-622-624-16)

CN1 D-1C M-1S
CN2 F-1C N-1S
CN3 C-2C K-2S
CN4 E-6C N-6S
CN5 E-6C M-6S
CN6 E-1C K-1S
CN7 E-1C M-1S
CN8 E-1C M-1S
CN9 D-1C L-1S
CN10 F-1C M-1S
CN11 F-1C N-1S
CN12 B-1C J-1S
CN13 A-1C H-1S
CN14 C-1C K-1S
CN15 G-2C P-2S
CN16 C-1C K-1S
CN17 A-4C H-4S
CN18 F-4C N-4S
CN19 B-1C J-1S
CN20 F-3C M-3S
CN21 D-3C L-4S
DI C-4C
D202 M-6S
D301 N-3S
D302 E-4C
D401 E-1C
D402 D-1C
D403 J-6S
D604 K-2S
D605 K-5S
D606 K-5S
D607 B-2C
D608 C-4C K-4S
D609 A-6C
D610 B-6C
D620 J-4S
D621 K-4S
E1 E-3C M-3S
E101 E-3C M-3S
E201 G-7C P-7S
E301 G-6C P-6S
E601 A-7C H-7S
E602 C-2C K-2S
FB4 M-5S
FB11 E-4C
FB104 L-5S
FB111 D-3C
FB208 L-7S
FB209 L-7S
FB210 M-7S
FL4 F-5C
FL5 E-5C M-5S
FL104 D-6C
FL105 D-5C L-5S
FL202 F-5C
FL203 G-6C
FL204 E-6C
FL601 A-5C
FL602 D-6C
FL603 D-6C
FL604 C-6C
FL605 A-4C
FL606 A-4C
FL607 B-2C
FL608 A-2C
IC1 F-5C
IC2 E-5C
IC3 E-4C
IC4 E-2C
IC5 M-2S E-3C
IC101 E-5C
IC102 D-4C
IC103 D-4C
IC104 D-3C I-3S
IC105 D-3C L-3S
IC201 F-7C N-7S
IC202 M-7S
IC203 E-7C M-7S
IC204 D-7C
IC205 J-4C
IC207 D-6C
IC208 L-6S
IC209 P-5S
IC210 M-7S
IC211 M-7S
IC212 N-4S
IC301 F-2C
IC302 D-3C
IC303 E-2C
IC304 G-3C N-3S
IC305 N-4S
IC306 G-5C P-5S
IC401 E-1C M-1S
IC501 D-3C
IC502 K-3S
IC503 C-2C
IC504 C-2C
IC601 A-5C
IC602 C-5C J-5S
IC603 B-6C
IC604 C-6C
IC605 J-5S
IC606 B-3C H-3S
IC607 C-3C K-3S
IC608 C-2C
IC609 C-4C K-4S
Q1 D-4C
Q3 M-5S
Q4 N-5S
Q5 E-4C
Q6 E-4C
Q7 E-4C
Q8 N-4S
Q10 M-4S
Q11 M-4S
Q12 M-4S
Q13 N-4S
Q14 M-4S
Q21 M-3S
Q22 M-3S
Q23 M-3S
Q24 M-2S
Q25 M-2S
Q26 M-3S
Q27 M-3S
Q28 M-3S
Q29 M-2S
Q30 M-2S
Q31 E-4C
Q32 N-6S
Q33 N-4S
Q34 M-6S
Q35 M-5S
Q102 L-5S
Q103 L-5S
Q104 N-5S
Q105 D-4C
Q106 D-4C
Q107 D-4C
Q108 M-4S
Q110 M-4S
Q111 L-4S
Q112 L-4S
Q113 M-4S
Q114 L-4S
Q115 L-4S
Q116 K-4S
Q117 K-5S
Q118 L-2S
Q119 L-2S
Q121 I-3S
Q122 L-3S
Q123 L-3S
Q124 L-2S
Q125 L-2S
Q126 M-3S
Q127 M-3S
Q128 M-3S
Q129 M-2S
Q130 L-2S
Q131 D-5C
Q201 F-6C
Q202 N-6S
Q203 N-5S
Q204 P-7S
Q205 N-6S
Q206 L-6S
Q207 M-7S
Q208 M-7S
Q209 M-6S
Q210 M-7S
Q211 E-6C
Q212 E-6C
Q213 M-6S
Q216 M-6S
Q217 L-6S
Q218 N-5S
Q219 P-5S
Q220 P-5S
Q221 N-7S
Q222 N-7S
Q223 N-7S
Q224 N-7S
Q225 P-7S
Q226 P-7S
Q227 N-7S
Q228 N-7S
Q229 P-5S
Q230 P-5S
Q231 K-7S
Q232 K-7S
Q233 K-7S
Q234 K-7S
Q235 K-7S
Q241 M-7S
Q242 N-6S
Q243 F-6C
Q244 M-6S
Q245 M-7S
Q246 N-7S
Q247 N-7S
Q248 N-4S
Q301 M-1S
Q302 E-2C
Q303 M-2S
Q304 M-1S
Q305 F-2C
Q306 N-2S
Q307 N-1S
Q308 F-2C
Q309 N-2S
Q310 N-1S
Q311 F-2C
Q312 N-2S
Q313 N-3S
Q315 N-3S
Q316 N-2S
Q317 M-2S
Q318 N-3S
Q319 E-3C
Q320 N-4S
Q322 P-3S
Q323 N-3S
Q324 N-3S
Q325 E-3C
Q326 N-3S
Q327 E-3C
Q328 E-3C
Q329 P-3S
Q401 M-1S
Q403 L-1S
Q404 D-1C
Q405 M-1S
Q406 M-1S
Q407 E-1C
Q408 E-1C
Q501 L-3S
Q502 L-3S
Q503 M-3S
Q504 C-3C
Q603 K-5S
Q604 K-5S
Q606 K-4S
Q607 K-4S
Q608 K-2S
Q609 K-2S
Q610 K-5S
Q611 K-5S
Q612 C-5C
Q613 J-3S
Q614 J-5S
Q615 C-2C
Q616 K-4S
Q617 K-2S
Q618 J-4S
Q619 J-4S
Q620 K-3S
RV1 E-5C M-5S
RV2 E-5C
RV3 E-5C M-5S
RV4 E-5C M-5S
RV5 F-5C N-5S
RV6 F-5C N-5S
RV7 E-5C M-3S
RV8 F-4C
RV9 F-4C
RV10 E-5C M-3S
RV11 F-4C
RV12 F-4C
RV13 E-3C
RV14 E-3C
RV15 E-3C
RV16 E-3C
RV17 E-2C M-2S
RV18 E-2C M-2S
RV19 E-2C M-2S
RV20 E-2C M-2S
RV21 E-3C
RV22 E-3C
RV23 F-5C M-5S
RV24 F-5C
RV102 D-6C
RV103 D-5C L-5S
RV104 D-5C M-5S
RV105 E-5C M-5S
RV106 E-5C M-5S
RV107 D-5C L-5S
RV108 E-4C
RV109 E-4C
RV110 D-5C L-5S
RV111 E-4C
RV112 E-4C
RV113 D-3C
RV114 D-3C
RV115 D-3C
RV116 D-3C
RV117 D-2C L-2S
RV118 D-2C L-2S
RV119 E-2C M-2S
RV120 D-2C L-2S
RV121 D-3C
RV122 D-3C
RV201 F-7C
RV202 F-6C
RV203 F-7C
RV204 F-7C
RV205 G-6C
RV206 F-7C
RV207 G-7C
RV208 G-7C
RV209 G-5C
RV210 C-7C
RV211 D-7C
RV212 C-7C
RV213 B-7C
RV214 B-7C
RV215 E-6C
RV216 E-6C
RV217 C-7C
RV218 G-5C
RV219 C-7C
RV220 G-5C
RV221 D-6C
RV305 E-1C M-1S
RV306 F-1C N-1S
RV307 F-1C N-1S
RV308 F-1C N-1S
RV501 L-2S
RV502 D-1C
RV503 C-2C
RV601 B-5C
RV602 B-5C
RV603 A-5C
RV604 A-5C
RV605 A-6C H-6S
RV606 B-6C J-6S
RV608 C-5C
RV609 C-5C K-5S
RV610 A-3C
RV611 A-2C
RV612 B-4C
RV613 B-2C
RV614 B-2C
RV615 C-1C
RV616 C-1C
RV618 B-4C
RV619 C-4C
RV620 B-5C
RV621 B-5C
S601 C-5C
T1 E-2C
T2 E-2C
T101 D-2C
T102 E-2C
TP1 E-3C M-3S
TP2 E-5C M-5S
TP3 E-5C M-5S
TP4 E-4C M-4S
TP5 E-5C M-5S
TP7 F-5C N-5S
TP8 E-4C M-4S
TP10 E-3C M-3S
TP101 D-3C L-3S
TP102 D-5C L-5S
TP103 D-5C L-5S
TP104 D-3C L-3S
TP105 D-4C L-4S
TP107 E-5C M-5S
TP108 E-4C M-4S
TP110 E-3C M-3S
TP208 E-6C M-6S
TP210 E-6C M-6S
TP301 D-3C P-3S
TP303 D-3C P-3S
TP304 G-2C P-2S
TP305 F-4C N-4S
TP311 F-5C N-2S
TP312 F-2C N-3S
TP401 D-1C L-1S
TP501 D-2C L-2S
TP502 D-3C L-3S
TP503 C-2C L-2S
TP504 D-2C L-2S
TP601 B-5C J-5S
TP602 B-5C J-5S
TP603 B-5C K-5S
TP604 C-5C K-5S
TP605 A-4C H-4S
TP606 A-4C H-4S
TP609 B-7C J-7S
TP610 B-6C K-6S
TP611 A-2C H-2S
TP612 A-2C H-2S
TP613 B-1C J-1S
TP614 A-1C H-1S
TP615 B-2C J-2S
TP616 B-2C J-2S
TP617 C-1C K-1S
TP618 C-2C J-2S
TP619 B-1C H-1S
TP620 A-1C H-1S
TP621 B-5C J-5S
TP622 B-5C J-5S
X1 D-7C

- C: COMPONENT SIDE
- S: SOLDERING SIDE



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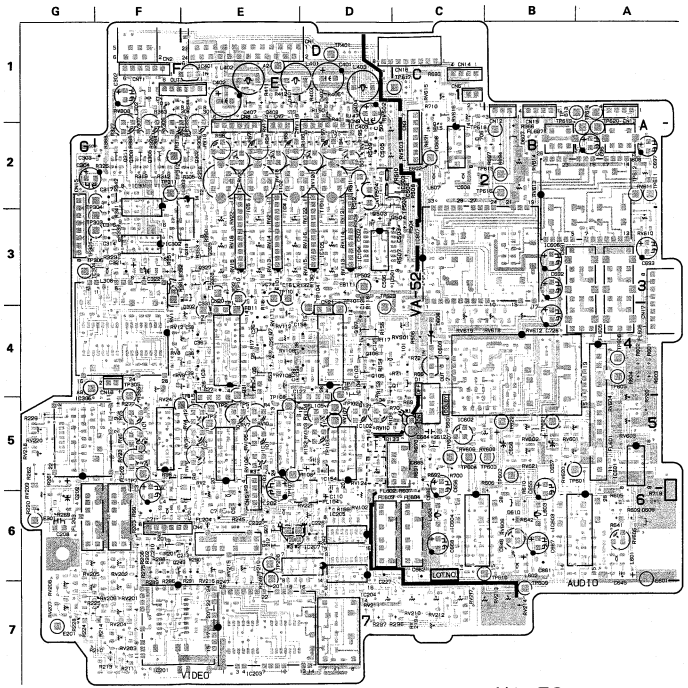
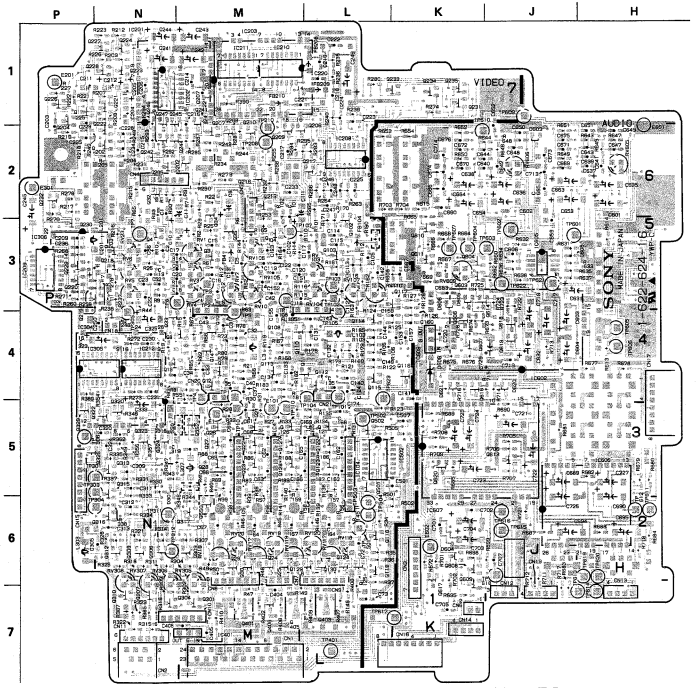


VA-52 -COMPONENT SIDE-
1-622-624-16
BVV-5 - - - VA-52
BVV-5PS - - - VA-52P

15-3 (c)



VA-52 -SOLDERING SIDE-
1-622-624-16
BVV-5 - - - VA-52
BVV-5PS - - - VA-52P

15-4 (c)

TC-39/39P; AUDIO AMPLIFIER
TIME CODE GENERATOR/READER

S/N 10661 to 10880

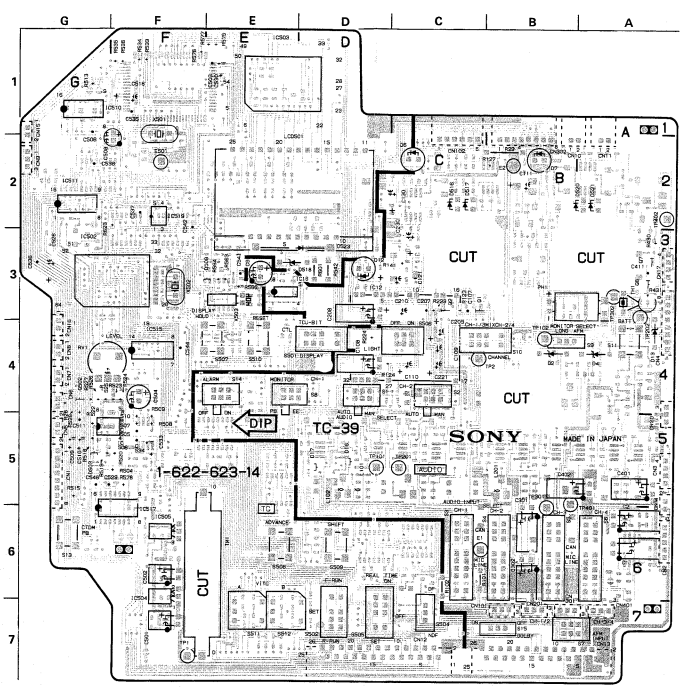
TC-39/39P

Ref. No.	Type	Pin No. +9V	+5V	GND	-5V
IC 1	NJM2041M-D		8		4
IC 2	NJM2041M-D		8		4
IC 3	NJM2041M-D		8		4
IC 6	NJM2041M-D		8		4
IC 7	NJM2041M-D		*		*
IC 8	NJM2041M-D		*		*
IC 11	NJM2041M-D		*		*
IC 12	BH1808	14	1	4	27
IC 13	NJM4580M		*		*
IC 14	TLC27M2CPS		*	4	
IC 15	TLC27M2CPS		*	4	
IC 16	NJM386M		*	4	
IC 101	TC4081BF		14	7	
IC 102	TC4071BF		14	7	
IC 103	TC4081BF		14	7	
IC 501	CXD1132Q		33, 73	12, 57	
IC 502	CXD1132Q-312		58	26	
IC 503	CXD1126Q		51	*	
IC 504	μPC78L05J			*	
IC 505	S-8053ALB			3	
IC 506	TLC27M2CPS		8	4	
IC 507	TC74HC32F		14	7	
IC 508	TC4053BF		16	7, 8	
IC 509	NJM4558M-A		8	4	
IC 510	MC14046BF		16	8	
IC 511	TC74HC4049F		1	8	
IC 512	TC4069UBF		14	7	
IC 513	TC74HC393F		14	7	
IC 514	TC4538BF		16	8	
IC 515	TC9401BF		14	7	
IC 516	MC14557BF		16	8	
IC 517	TC74HC221F		16	8	

NOTE; *·····REFER TO SCHEMATIC

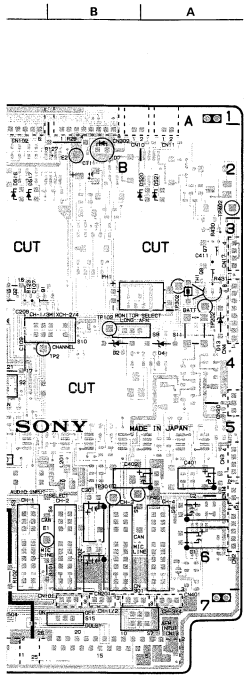
TC-39/39P (1-622-623-14)

CN1	G - 5 C	D520	A - 2 C	RV102	Q - 6 S
	M - 3 S		S - 6 S	RV201	Q - 2 S
CN2	A - 6 C	D521	A - 2 C	RV202	Q - 5 S
	S - 2 S		S - 6 S	RV301	R - 2 S
CN3	A - 5 C	D523	D - 3 C	RV302	R - 6 S
	S - 3 S		P - 5 S	RV401	S - 3 S
CN4	A - 4 C			RV402	S - 6 S
	S - 4 S	E1	C - 6 C		
CN5	G - 5 C		R - 2 S	S1	D - 4 C
	M - 3 S	E2	B - 2 C	S2	C - 4 C
CN6	G - 4 C		R - 6 S	S3	C - 6 C
	M - 3 S	E501	F - 2 C	S4	B - 6 C
CN7	G - 4 C		M - 6 S	S5	B - 6 C
	M - 4 S			S6	A - 6 C
CN8	G - 4 C	IC1	S - 2 S	S7	B - 7 C
	M - 4 S	IC2	P - 3 S	S8	E - 4 C
CN9	Q - 2 C	IC3	Q - 3 S	S9	B - 4 C
	M - 6 S	IC6	Q - 3 S	S10	B - 4 C
CN10	B - 1 C	IC7	R - 3 S	S11	A - 4 C
	S - 6 S	IC9	S - 3 S	S13	G - 6 C
CN11	A - 1 C	IC11	S - 3 S	S14	E - 4 C
	S - 6 S	IC12	C - 4 C	S15	B - 7 C
CN12	D - 7 C		Q - 4 S	S501	D - 4 C
	Q - 1 S	IC13	S - 6 S	S502	D - 7 C
CN13	B - 7 C	IC14	Q - 6 S	S504	C - 7 C
	R - 1 S	IC15	R - 6 S	S505	D - 7 C
CN14	A - 5 C	IC16	E - 3 C	S506	C - 4 C
	S - 2 S	IC101	P - 2 S	S507	E - 4 C
CN15	G - 1 C	IC102	Q - 2 S	S508	E - 6 C
	M - 6 S	IC103	Q - 2 S	S509	D - 6 C
CN16	G - 4 C	IC501	M - 7 S	S510	E - 4 C
	M - 4 S	IC502	F - 3 C	S511	E - 7 C
CN17	A - 3 C	IC503	E - 1 C	S512	E - 7 C
	S - 5 S	IC504	F - 6 C		
CN20	A - 5 C	IC505	F - 6 C	SL1	M - 1 S
	N - 2 S		N - 2 S	SL2	S - 1 S
CN101	B - 7 C	IC506	G - 5 C	SL3	S - 2 S
	R - 1 S	IC507	M - 5 S		
CN102	C - 1 C	IC508	M - 6 S	TH1	A - 3 C
	Q - 6 S	IC509	M - 3 S		
CN201	B - 7 C	IC510	G - 1 C	TM1	E - 6 C
	R - 1 S	IC511	G - 2 C		
CN301	B - 7 C	IC512	N - 5 S	TP1	F - 7 C
	S - 1 S	IC513	M - 5 S		N - 1 S
CN302	B - 1 C	IC514	N - 2 S	TP2	A - 4 C
	R - 6 S	IC515	F - 4 C		R - 4 S
CN401	A - 7 C	IC516	M - 2 S	TP101	D - 5 C
	S - 1 S	IC517	F - 6 C		Q - 3 S
		IC518	N - 4 S	TP102	B - 4 C
D1	S - 5 S	IC519	P - 2 C		R - 4 S
D2	B - 4 C	IC520	N - 3 S	TP201	C - 5 C
	R - 4 S				Q - 3 S
D3	R - 4 S	LCD501	E - 2 C	TP202	A - 3 C
D4	A - 4 C		P - 6 S		S - 4 S
	S - 4 S			TP301	B - 6 C
D5	S - 3 S	PH1	B - 3 C		R - 2 S
D6	C - 2 C			TP302	A - 3 C
	Q - 6 S	Q1	C - 3 C		S - 5 S
D7	B - 2 C	Q2	C - 3 C	TP401	B - 5 C
	R - 6 S	Q3	R - 5 S		S - 2 S
D8	P - 5 S	Q4	R - 5 S	TP402	A - 2 C
D12	D - 3 C	Q5	S - 4 S		S - 5 S
	P - 5 S	Q6	S - 5 S		
D13	A - 4 C	Q7	A - 3 C	X501	F - 2 C
	S - 4 S	Q8	A - 3 C	X502	F - 3 C
D14	Q - 6 S	Q9	Q - 5 S	X503	E - 3 C
D15	Q - 5 S	Q10	Q - 5 S		
D16	D - 5 C	Q11	Q - 5 S		
D17	D - 5 C	Q12	S - 4 S		
D20	S - 1 S	Q13	S - 3 S		
D502	M - 2 S	Q14	S - 4 S		
D503	G - 5 C	Q15	P - 4 S		
D504	M - 3 S	Q16	Q - 1 S		
D505	M - 6 S	Q17	P - 2 S		
D506	M - 6 S	Q18	R - 4 S		
D507	M - 2 S	Q501	M - 2 S		
D508	E - 3 C	Q502	G - 4 C		
D512	M - 1 S	Q503	P - 7 S		
D513	M - 1 S	Q506	P - 5 S		
D514	N - 6 S	Q507	P - 5 S		
D515	N - 6 S	Q508	M - 5 S		
D516	C - 2 C	Q509	N - 6 S		
	Q - 6 S	Q510	N - 6 S		
D517	C - 2 C				
	R - 6 S	RV1	G - 4 C		
D518	E - 3 C		M - 4 S		
	P - 5 S	RV2	S - 3 S		
D519	P - 6 S	RV101	P - 2 S		



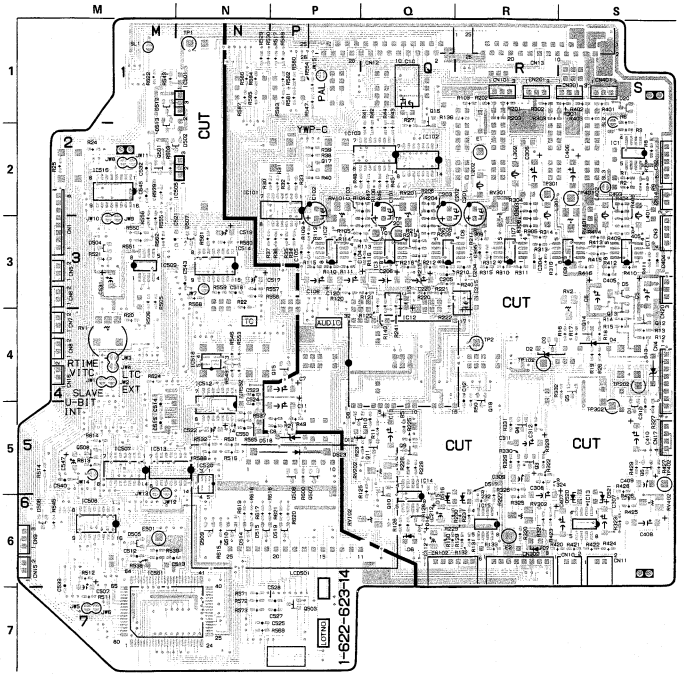
TC-39 -COMPONENT SIDE-

1-622-623-14
BVV-5 ---- TC-39
BVV-5PS --- TC-39P



TC-39 -COMPONENT SIDE-

1-622-623-14
BVV-5 ---- TC-39
BVV-5PS --- TC-39P



TC-39 -SOLDERING SIDE-

1-622-623-14
BVV-5 ---- TC-39
BVV-5PS --- TC-39P

TC-39/39P; AUDIO AMPLIFIER
TIME CODE GENERATOR/READER

S/N 10881 to 11506

TC-39/39P

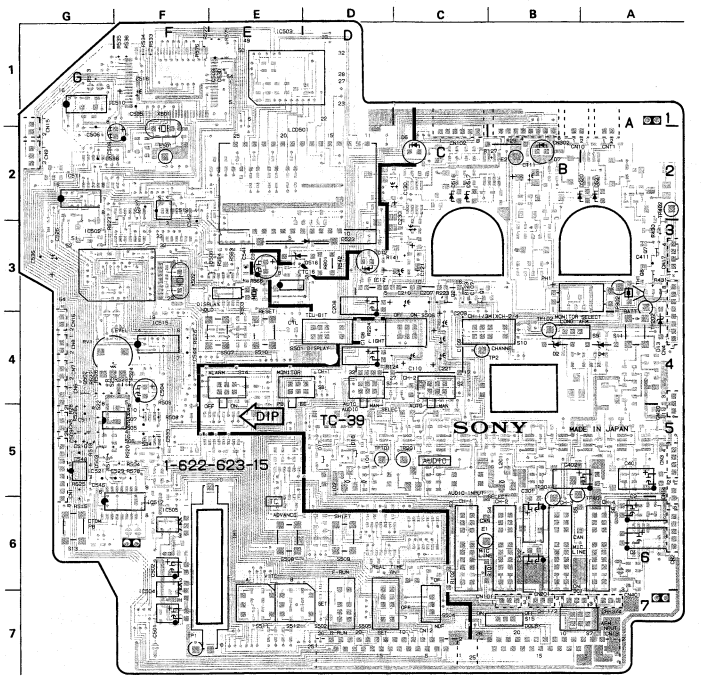
Ref. No.	Type	Pin No. +9V	+5V	GND	−5V
IC 1	NJM2041M-D		8		4
IC 2	NJM2041M-D		8		4
IC 3	NJM2041M-D		8		4
IC 6	NJM2041M-D		8		4
IC 7	NJM2041M-D		*		*
IC 9	NJM2041M-D		*		*
IC 11	NJM2041M-D		*		*
IC 12	BH1808	14	1	4	27
IC 13	NJM4580M		*		*
IC 14	TLC27M2CPS		*	4	
IC 15	TLC27M2CPS		*	4	
IC 16	NJM386M		*	4	
IC 101	TC4081BF		14	7	
IC 102	TC4077BF		14	7	
IC 103	TC4081BF		14	7	
IC 501	CXD1132Q		33, 73	12, 52	
IC 502	CXD1132Q-312		58	26	
IC 503	CXD1126Q		51	*	
IC 504	μPC78L05J			*	
IC 505	S-8053ALB			3	
IC 506	TLC27M2CPS		8	4	
IC 507	TC74HC32F		14	7	
IC 508	TC4053BF		16	7, 8	
IC 509	NJM4556M-A		8	4	
IC 510	MC14584BF		16	8	
IC 511	TC74HC4049F		1	8	
IC 512	TC4556UBF		14	7	
IC 513	TC74HC393F		14	7	
IC 514	TC4538BF		16	8	
IC 515	TC9041BF		14	7	
IC 516	MC14557BF		16	8	
IC 517	TC74HC221F		16	8	

NOTE: * ·····REFER TO SCHEMATIC

TC-39/39P (1-622-623-15)

CN1	G - 5 C	D520	A - 2 C	RV2	S - 3 S
	M - 3 S		S - 6 S	RV101	P - 2 S
CN2	A - 6 C	D521	A - 2 C	RV102	Q - 6 S
	S - 2 S		S - 6 S	RV201	Q - 2 S
CN3	A - 5 C	D523	D - 3 C	RV202	Q - 5 S
	S - 3 S		P - 5 S	RV301	R - 2 S
CN4	A - 4 C			RV302	R - 6 S
	S - 4 S	E1	C - 6 C	RV401	S - 3 S
CN5	G - 5 C		R - 2 S	RV402	S - 6 S
	M - 3 S	E2	B - 2 C		
CN6	G - 4 C		R - 6 S	S1	D - 4 C
	M - 3 S	E501	F - 2 C	S2	C - 4 C
CN7	G - 4 C		M - 6 S	S3	C - 6 C
	M - 4 S			S4	B - 6 C
CN8	G - 4 C	IC1	S - 2 S	S5	B - 6 C
	M - 4 S	IC2	P - 3 S	S6	A - 6 C
CN9	G - 2 C	IC3	Q - 3 S	S7	B - 7 C
	M - 6 S	IC6	Q - 3 S	S8	E - 4 C
CN10	B - 1 C	IC7	R - 3 S	S9	B - 4 C
	S - 6 S	IC9	S - 3 S	S10	B - 4 C
CN11	A - 1 C	IC11	S - 3 S	S11	A - 4 C
	S - 6 S	IC12	C - 4 C	S13	G - 6 C
CN12	D - 7 C		S - 4 S	S14	E - 4 C
	Q - 1 S	IC13	S - 6 S	S15	B - 7 C
CN13	B - 7 C	IC14	Q - 6 S	SS01	D - 4 C
	R - 1 S	IC15	R - 6 S	SS02	D - 7 C
CN14	A - 5 C	IC16	E - 3 C	SS04	C - 7 C
	S - 2 S	IC101	P - 2 S	SS05	D - 7 C
CN15	G - 1 C	IC102	Q - 2 S	SS06	G - 4 C
	M - 6 S	IC103	Q - 2 S	SS07	E - 4 C
CN16	G - 4 C	IC501	M - 7 S	SS08	E - 6 C
	M - 4 S	IC502	F - 3 C	SS09	D - 6 C
CN17	A - 3 C	IC503	E - 1 C	SS10	E - 4 C
	S - 3 S	IC504	F - 6 C	SS11	E - 7 C
CN20	A - 5 C		N - 1 S	SS12	E - 7 C
	S - 3 S	IC505	F - 6 C		
CN101	B - 7 C		N - 2 S	SL1	M - 1 S
	R - 1 S	IC506	G - 5 C	SL2	S - 1 S
CN102	C - 1 C	IC507	M - 5 S	SL3	S - 2 S
	S - 6 S	IC508	M - 6 S		
CN201	B - 7 C	IC509	M - 3 S	TH1	A - 3 C
	R - 1 S	IC510	G - 1 C		
CN301	B - 7 C	IC511	G - 2 C	TM1	E - 6 C
	S - 1 S	IC512	N - 5 S		
CN302	B - 1 C	IC513	M - 1 S	TP1	F - 7 C
	R - 6 S	IC514	N - 3 S		N - 1 S
CN401	A - 7 C	IC515	F - 4 C	TP2	C - 4 C
	S - 1 S	IC516	M - 2 S		R - 4 S
		IC517	F - 6 C	TP101	D - 5 C
D1	S - 5 S	IC518	N - 4 S		Q - 3 S
D2	B - 4 C	IC519	F - 2 C	TP102	B - 4 C
	R - 4 S	IC520	N - 5 S		R - 4 S
D3	R - 4 S	IC521	G - 5 C	TP201	C - 5 C
D4	A - 4 C				Q - 3 S
	S - 4 S	LCD501	E - 2 C	TP202	A - 3 C
D5	S - 3 S		P - 6 S		S - 4 S
D6	C - 2 C			TP301	B - 6 C
	Q - 6 S	PH1	B - 3 C		R - 2 S
D7	B - 7 C			TP302	A - 3 C
	R - 6 S	Q1	C - 3 C		S - 5 S
D8	P - 5 S	Q2	C - 3 C	TP401	B - 5 C
D12	D - 3 C	Q3	R - 5 S		S - 2 S
	P - 5 S	Q4	R - 5 S	TP402	A - 2 C
D13	A - 4 C	Q5	S - 4 S		S - 5 S
	S - 4 S	Q6	S - 5 S		
D14	Q - 6 S	Q7	A - 3 C	X501	F - 2 C
D15	Q - 5 S	Q8	A - 3 C	X502	F - 3 C
D16	D - 5 C	Q9	Q - 5 S	X503	E - 3 C
D17	D - 5 C	Q10	Q - 5 S		
D20	S - 1 S	Q11	Q - 5 S		
D502	M - 2 S	Q12	S - 4 S		
D503	G - 5 C	Q13	S - 3 S		
D504	M - 3 S	Q14	S - 4 S		
D505	M - 6 S	Q15	P - 4 S		
D506	M - 6 S	Q16	Q - 1 S		
D507	N - 3 S	Q17	P - 2 S		
D508	E - 3 C	Q18	R - 3 S		
D512	M - 1 S	Q501	M - 2 S		
D513	M - 1 S	Q502	G - 4 C		
D514	N - 6 S	Q503	P - 7 S		
D515	N - 6 S	Q506	P - 5 S		
D516	C - 7 C	Q507	P - 5 S		
	Q - 6 S	Q508	M - 5 S		
D517	C - 2 C	Q509	N - 6 S		
	R - 6 S	Q510	N - 6 S		
D518	E - 3 C				
	P - 5 S	RV1	G - 4 C		
D519	P - 6 S		M - 4 S		

- C: COMPONENT SIDE
- S: SOLDERING SIDE

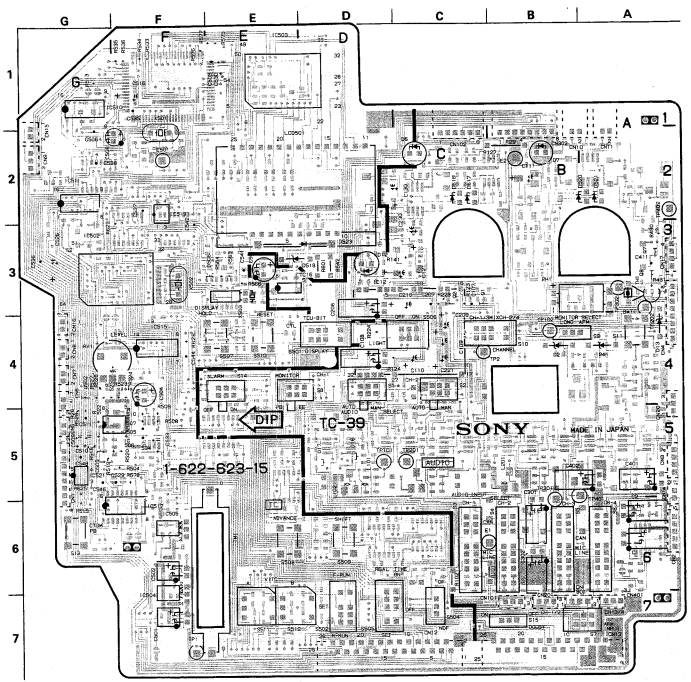


TC-39 -COMPONENT SIDE-
1-622-623-15
BVV-5 ---- TC-39
BVV-5PS --- TC-39P

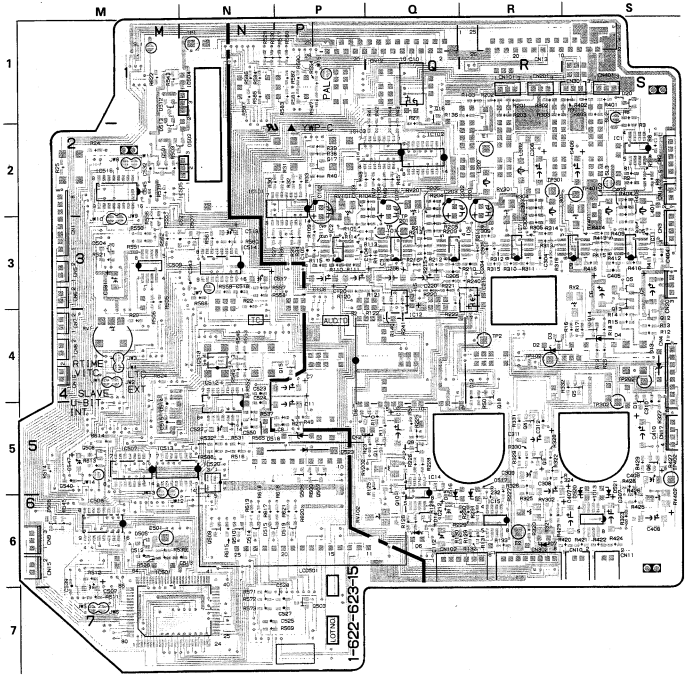
TC-39/39P

TC-39/39P; AUDIO AMPLIFIER
TIME CODE GENERATOR/READER

S/N 10881 to 11506



TC-39 -COMPONENT SIDE-
1-622-623-15
BVV-5 ---- TC-39
BVV-5PS --- TC-39P



TC-39 -SOLDERING SIDE-
1-622-623-15
BVV-5 ---- TC-39
BVV-5PS --- TC-39P

TC-39/39P; AUDIO AMPLIFIER
TIME CODE GENERATOR/READER

S/N 11507 to 11719

TC-39/39P

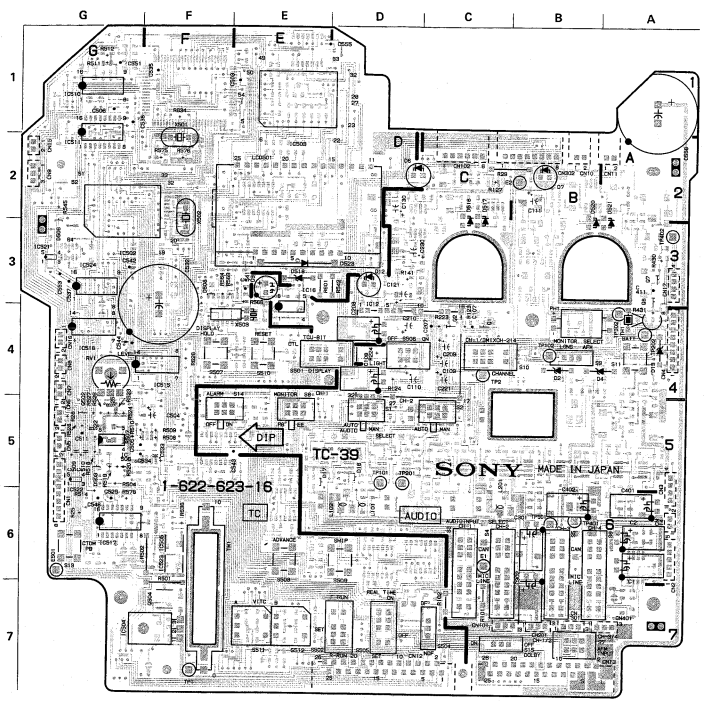
Ref. No.	Type	Pin No. +3V	+5V	GND	−5V
IC 1	NJM2041M-D		8		4
IC 2	NJM2041M-D		8		4
IC 3	NJM2041M-D		8		4
IC 6	NJM2041M-D		8		4
IC 7	NJM2041M-D		*		*
IC 9	NJM2041M-D		*		*
IC 11	NJM2041M-D		*		*
IC 12	BH1608	14	1	4	27
IC 13	NJM4560M		*		*
IC 14	TLC27M2CPS		*	4	
IC 15	TLC27M2CPS		*	4	
IC 16	NJM386M		14	4	
IC 101	TC4081BF		14	7	
IC 102	TC4071BF		14	7	
IC 103	TC4081BF		14	7	
IC 501	CXD1132Q		33,73	12,52	
IC 502	CXD1133Q-312		37,56	26	
IC 503	CXD1126Q		51	27	
IC 504	μPC78N05H			*	
IC 505	BH5VA39CA		*	3	
IC 506	TLC27M2CPS		8	4	
IC 508	TC4053BF		16	7,8	
IC 509	NJM4558M-A		8	4	
IC 510	MC14046BF		16	8	
IC 511	TC74HC4049F		1	8	
IC 512	TC4069UBF		14	7	
IC 513	TC4020BFNB		14	7	
IC 514	TC4538BF		16	8	
IC 515	TC5040138F		14	7	
IC 516	MC14538BF		16	8	
IC 517	TC74HC221F		16	8	
IC 518	TC4081BF		14	7	
IC 519	TC4071BF		14	7	
IC 520	TC4071BF		14	7	
IC 521	TC4501F		5	3	
IC 522	TC4501F		5	3	
IC 523	S-81230AG-RB-T1				1
IC 524	TC4538BF		16	8	

NOTE: *·····REFER TO SCHEMATIC

TC-39/39P (1-622-623-16)

CN1	G-6 C	D521	A-3 C	RV1	G-4 C
	M-3 S		T-6 S		M-4 S
CN2	A-6 C	D523	E-3 C	RV2	S-4 S
	T-2 S		P-5 S	RV101	P-3 S
CN3	A-5 C			RV102	P-6 S
	T-3 S	E1	C-6 C	RV201	R-3 S
CN4	A-4 C		R-2 S	RV202	P-5 S
	T-4 S	E2	B-2 C	RV301	S-3 S
CN5	G-5 C		S-6 S	RV302	S-6 S
	M-3 S	E501	G-6 C	RV401	S-3 S
CN6	G-5 C		M-2 S	RV402	T-6 S
	M-3 S				
CN7	G-4 C	IC1	T-2 S	S1	D-5 C
	M-4 S	IC2	P-3 S	S2	C-5 C
CN8	G-4 C	IC3	R-3 S	S3	C-6 C
	M-4 S	IC6	N-3 S	S4	C-6 C
CN9	G-2 C	IC7	S-3 S	S5	B-6 C
	M-6 S	IC9	S-3 S	S6	A-6 C
CN10	B-2 C	IC11	T-3 S	S7	B-7 C
	S-6 S	IC12	D-4 C	S8	E-5 C
CN11	A-2 C		R-4 S	S9	B-4 C
	T-6 S	IC13	T-6 S	S10	C-4 C
CN12	D-7 C	IC14	R-6 S	S11	A-4 C
	P-1 S	IC15	S-6 S	S13	G-6 C
CN13	B-7 C	IC16	E-4 C	S14	F-5 C
	S-1 S	IC101	N-3 S	S15	C-7 C
CN14	A-6 C	IC102	R-2 S	S501	D-4 C
	T-2 S	IC103	P-2 S	S502	D-7 C
CN15	G-2 C	IC501	M-7 S	S504	C-7 C
	M-6 S	IC502	G-2 C	S505	D-7 C
CN16	G-4 C	IC503	E-1 C	S506	D-4 C
	M-4 S	IC504	F-7 C	S507	F-4 C
CN17	A-3 C		M-1 S	S508	E-5 C
	T-5 S	IC505	F-6 C	S509	D-6 C
CN101	B-7 C	IC506	G-5 C	S510	E-4 C
	S-1 S	IC507	M-5 S	S511	E-7 C
CN102	C-2 C	IC508	M-6 S	S512	E-7 C
	R-6 S	IC509	M-3 S		
CN201	B-7 C	IC510	G-1 C	SL1	M-1 S
	S-1 S	IC511	G-2 C	SL2	T-2 S
CN301	B-7 C	IC512	N-5 S	SL3	T-2 S
	S-1 S	IC513	M-5 S		
CN302	B-2 C	IC514	N-3 S	TH1	A-4 C
	S-6 S	IC515	F-4 C		
CN401	A-7 C	IC516	M-4 C	TM1	F-7 C
	T-1 S	IC517	G-6 C		
		IC518	G-4 C	TP1	F-7 C
D1	T-5 S	IC519	N-6 C		M-1 S
D2	B-4 C	IC520	P-7 S	TP2	C-4 C
	S-4 S	IC521	G-3 C		R-4 S
D3	S-4 S	IC522	G-5 C	TP101	D-5 C
D4	A-4 C	IC523	F-6 C		P-3 S
	T-4 S	IC524	G-3 C	TP102	B-4 C
D5	T-3 S				S-4 S
D6	D-2 C	LCD501	E-2 C	TP201	D-5 C
	R-6 S		P-6 S		R-3 S
D7	B-2 C			TP202	A-4 C
	S-6 S	PH1	B-4 C		T-4 S
D8	P-5 S			TP301	B-6 C
D12	D-3 C	Q1	C-4 C		S-2 S
	P-5 S	Q2	C-4 C	TP302	A-4 C
D13	A-4 C	Q3	S-5 S		T-3 S
	T-4 S	Q4	S-5 S	TP401	B-6 C
D14	R-6 S	Q5	S-4 S		S-2 S
D15	R-6 S	Q6	T-5 S	TP402	A-3 C
D16	D-5 C	Q7	A-3 C		T-5 S
D17	E-5 C	Q8	A-3 C		
D20	T-1 S	Q9	R-5 S	X501	F-2 C
D502	M-1 S	Q10	P-6 S	X502	F-3 C
D503	G-5 C	Q11	P-5 S	X503	E-4 C
D504	M-3 S	Q12	T-4 S		
D505	M-6 S	Q13	T-4 S		
D506	G-3 C	Q14	T-4 S		
D507	M-3 S	Q15	N-4 S		
D508	F-3 C	Q16	R-2 S		
D512	M-1 S	Q17	P-2 S		
D513	M-2 S	Q18	S-5 S		
D514	N-6 S	Q501	N-5 S		
D515	N-6 S	Q502	G-5 C		
D516	C-3 C	Q503	N-7 S		
	R-6 S	Q504	F-7 C		
D517	C-3 C	Q506	N-5 S		
	R-6 S	Q507	P-5 S		
D518	E-3 C	Q508	N-6 S		
	N-5 S	Q509	M-2 S		
D520	B-3 C	Q510	N-6 S		
	S-6 S				

- C; COMPONENT SIDE
- S; SOLDERING SIDE



TC-39 -COMPONENT SIDE-
1-622-623-16
BVV-5 ---- TC-39
BVV-5PS --- TC-39P

TC-39/39P; AUDIO AMPLIFIER
TIME CODE GENERATOR/READER

S/N 11507 to 11719

G - 4 C
M - 4 S
S - 4 S
P - 3 S
P - 6 S
R - 3 S
P - 5 S
S - 3 S
S - 6 S
S - 3 S
T - 6 S

D - 5 C
C - 5 C
C - 6 C
C - 6 C
B - 6 C
A - 6 C
B - 7 C
E - 5 C
B - 4 C
C - 4 C
A - 4 C
G - 6 C
F - 5 C
C - 7 C
D - 4 C
A - 7 C
D - 7 C
C - 7 C
D - 7 C
D - 4 C
F - 4 C
E - 6 C
D - 6 C
E - 4 C
E - 7 C
E - 7 C

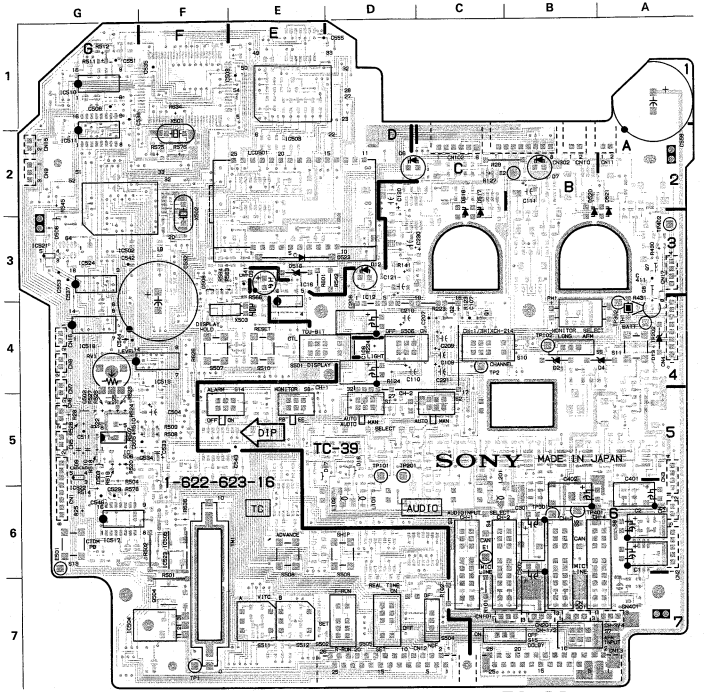
M - 1 S
T - 2 S
T - 3 S

A - 4 C

F - 7 C

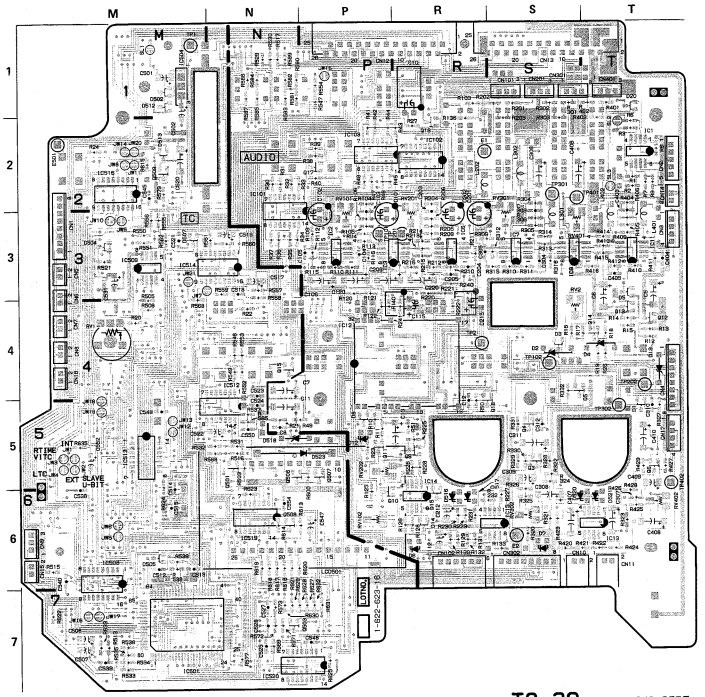
F - 7 C
M - 1 S
C - 4 C
R - 4 S
1 D - 5 C
P - 3 S
2 B - 4 C
S - 4 S
1 D - 5 C
R - 3 S
2 A - 4 C
T - 4 S
1 B - 6 C
S - 2 S
2 A - 4 C
T - 5 S
1 B - 6 C
S - 2 S
2 A - 3 C
T - 5 S

F - 2 C
F - 3 C
E - 4 C



TC-39 -COMPONENT SIDE-
1-622-623-16
BVV-5 ---- TC-39
BVV-5PS --- TC-39P

15-10 (c)



TC-39 -SOLDERING SIDE-
1-622-623-16
BVV-5 ---- TC-39
BVV-5PS --- TC-39P

15-11 (c)

TC-39/39P: AUDIO AMPLIFIER TIME CODE GENERATOR/READER

S/N 11720 and higher

TC-39/39P

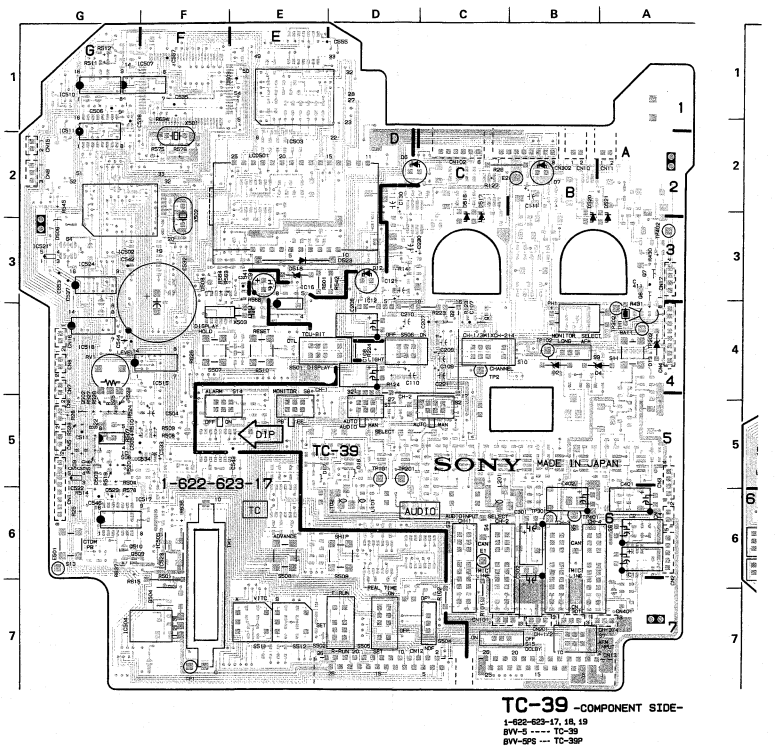
Ref. No.	Type	Pin No. +3V	+5V	GND	−3V
IC 1	NJM2041M-D		8		4
IC 2	NJM2041M-D		8		4
IC 3	NJM2041M-D		8		4
IC 6	NJM2041M-D		8		4
IC 7	NJM2041M-D		*		*
IC 9	NJM2041M-D		*		*
IC 11	NJM2041M-D		*		*
IC 12	BH1808	14	1	4	27
IC 13	NJM4560M-D		*		*
IC 14	TLC27M2CPS		*	4	
IC 15	TLC27M2CPS		*	4	
IC 16	NJM386M		*	4	
IC 101	TC4081BF		14	7	
IC 102	TC4071BF		14	7	
IC 103	TC4081BF		14	7	
IC 501	CXD1132Q		33, 73	12, 52	
IC 502	CXD1133Q-312		37, 58	26	
IC 503	CXD1128Q		51	27	
IC 504	μPC78N05H			*	
IC 505	RH5VA26CA		*	3	
IC 506	TLC27M2CPS		8	4	
IC 507	TC4011BF		14	7	
IC 508	TC4053BF		16	7, 8	
IC 509	NJM4556M-A		8	4	
IC 510	MC14046BF		16	8	
IC 511	TC74HC4049F		1	8	
IC 512	TC4069UBF		14	7	
IC 513	TC4020BF/HB		14	7	
IC 514	TC4538BF		16	8	
IC 515	TC5040I3BF		14	7	
IC 516	MC14557BF		16	8	
IC 517	TC74HC221F		16	8	
IC 518	TC4081BF		14	7	
IC 519	TC4071BF		14	7	
IC 520	TC4071BF		14	7	
IC 521	TC4501F		5	3	
IC 522	TC4501F		5	3	
IC 523	S-81230AG-RB-T1				1
IC 524	TC4538BF		16	8	

NOTE: * ------ REFER TO SCHEMATIC

TC-39/39P (1-622-623-17)

CN1	G - 6 C	D521	A - 3 C	Q509	G - 6 C
	M - 3 S		T - 6 S		M - 2 S
CN2	A - 6 C	D523	E - 3 C	Q510	G - 6 C
	T - 2 S		P - 3 S		N - 6 S
CN3	A - 5 C			RV1	G - 4 C
	T - 3 S	E1	C - 6 C		M - 4 S
CN4	A - 4 C		R - 2 S	RV2	S - 4 S
	T - 4 S	E2	B - 2 C	RV101	P - 3 S
CN5	G - 5 C		S - 6 S	RV102	P - 6 S
	M - 3 S	E501	G - 6 C	RV201	R - 3 S
CN6	G - 5 C		M - 2 S	RV202	P - 5 S
	M - 3 S			RV301	S - 3 S
CN7	G - 4 C	IC1	T - 2 S	RV302	S - 6 S
	M - 4 S	IC2	P - 3 S	RV401	S - 3 S
CN8	G - 4 C	IC3	R - 3 S	RV402	T - 6 S
	M - 4 S	IC6	R - 4 S		
CN9	G - 2 C	IC7	S - 3 S	S1	D - 5 C
	M - 6 S	IC9	S - 3 S	S2	C - 5 C
CN10	B - 2 C	IC11	T - 3 S	S3	C - 6 C
	S - 6 S	IC12	D - 4 C	S4	C - 6 C
CN11	A - 2 C		R - 4 S	S5	B - 6 C
	T - 6 S	IC13	T - 6 S	S6	A - 6 C
CN12	D - 7 C	IC14	R - 6 S	S7	B - 7 C
	P - 1 S	IC15	S - 6 S	S8	E - 5 C
CN13	B - 7 C	IC16	E - 4 C	S9	B - 4 C
	S - 1 S	IC101	N - 3 S	S10	C - 4 C
CN14	A - 6 C	IC102	R - 2 S	S11	A - 4 C
	T - 2 S	IC103	P - 2 S	S13	G - 6 C
CN15	G - 2 C	IC501	M - 7 S	S14	F - 5 C
	M - 6 S	IC502	G - 2 C	S15	C - 7 C
CN16	G - 4 C	IC503	E - 1 C	S501	D - 4 C
	M - 4 S	IC504	F - 7 C	S502	D - 7 C
CN17	A - 3 C		M - 1 S	S504	C - 7 C
	T - 5 S	IC505	F - 6 C	S505	D - 7 C
CN101	B - 7 C	IC506	G - 5 C	S506	D - 4 C
	S - 1 S	IC507	F - 1 C	S507	F - 4 C
CN102	C - 2 C		M - 5 S	S508	E - 6 C
	R - 6 S	IC508	R - 6 S	S509	T - 6 C
CN201	B - 7 C	IC509	M - 3 S	S510	E - 4 C
	S - 1 S	IC510	G - 1 C	S511	E - 7 C
CN301	B - 7 C	IC511	G - 2 C	S512	E - 7 C
	S - 1 S	IC512	N - 5 S		
CN302	B - 2 C	IC513	M - 5 S	SL1	M - 1 S
	S - 6 S	IC514	N - 3 S	SL2	T - 2 S
CN401	A - 7 C	IC515	F - 4 C	SL3	T - 2 S
	T - 1 S	IC516	M - 2 S		
		IC517	G - 6 C	TH1	A - 4 C
D1	T - 5 S	IC518	G - 4 C		
D2	B - 4 C		M - 2 S	TM1	F - 7 C
	S - 4 S	IC519	N - 6 S		
D3	S - 4 S	IC520	P - 7 S	TP1	F - 7 C
D4	A - 4 C	IC521	G - 3 C		M - 1 S
	T - 4 S	IC522	G - 5 C	TP2	C - 4 C
D5	T - 3 S	IC523	F - 6 C		R - 4 S
D6	D - 2 C	IC524	G - 3 C	TP101	D - 5 C
	R - 6 S				P - 3 S
D7	B - 2 C	LCD501	E - 2 C	TP102	B - 4 C
	S - 6 S		P - 6 S		S - 4 S
D8	P - 5 S			TP201	D - 5 C
D12	D - 3 C	PH1	B - 4 C		R - 3 S
	P - 5 S			TP202	A - 4 C
D13	A - 4 C	Q1	C - 4 C		T - 4 S
	T - 4 S	Q2	C - 4 C	TP301	B - 6 C
D14	R - 6 S	Q3	S - 5 S		S - 2 S
D15	R - 6 S	Q4	S - 5 S	TP302	A - 4 C
D16	D - 5 C	Q5	S - 4 S		T - 3 S
D17	E - 5 C	Q6	T - 5 S	TP401	B - 6 C
D20	T - 1 S	Q7	A - 3 C		S - 2 S
D502	N - 1 S	Q8	A - 3 C	TP402	A - 3 C
D503	G - 1 C	Q9	R - 5 S		T - 5 S
D504	M - 3 S	Q10	P - 6 S		
D505	M - 6 S	Q11	P - 5 S	X501	F - 2 C
D506	G - 3 C	Q12	T - 4 S	X502	F - 3 C
D507	M - 3 S	Q13	T - 4 S	X503	E - 4 C
D508	F - 3 C	Q14	T - 4 S		
D512	M - 1 S	Q15	N - 4 S		
D513	M - 2 S	Q16	R - 2 S		
D514	N - 6 S	Q17	P - 2 S		
D515	N - 6 S	Q18	S - 5 S		
D516	C - 3 C	Q501	N - 5 S		
	R - 6 S	Q502	G - 5 C		
D517	C - 3 C	Q503	N - 7 S		
	R - 6 S	Q504	F - 7 C		
D518	E - 3 C	Q506	N - 5 S		
	N - 5 S	Q507	P - 5 S		
D520	B - 3 C	Q508	N - 6 S		
	S - 6 S				

- C: COMPONENT SIDE
- S: SOLDERING SIDE



TC-39 -COMPONENT SIDE-
1-622-623-17, 18, 19
BVV-5 ---- TC-39
BVV-5PS --- TC-39P

TC-39/39P; AUDIO AMPLIFIER
TIME CODE GENERATOR/READER

S/N 11720 and higher

G-6C
M-2S
G-6C
N-6S
G-4C
M-4S
S-4S
P-3S
P-6S
R-3S
P-3S
S-3S
S-6S
S-3S
T-6S

D-5C
C-5C
C-6C
C-6C
B-6C
A-6C
B-7C
E-5C
B-4C
C-4C
A-4C
G-5C
F-5C
C-7C
D-4C
D-7C
C-7C
D-4C
D-4C
F-4C
E-6C
D-6C
E-4C
E-7C

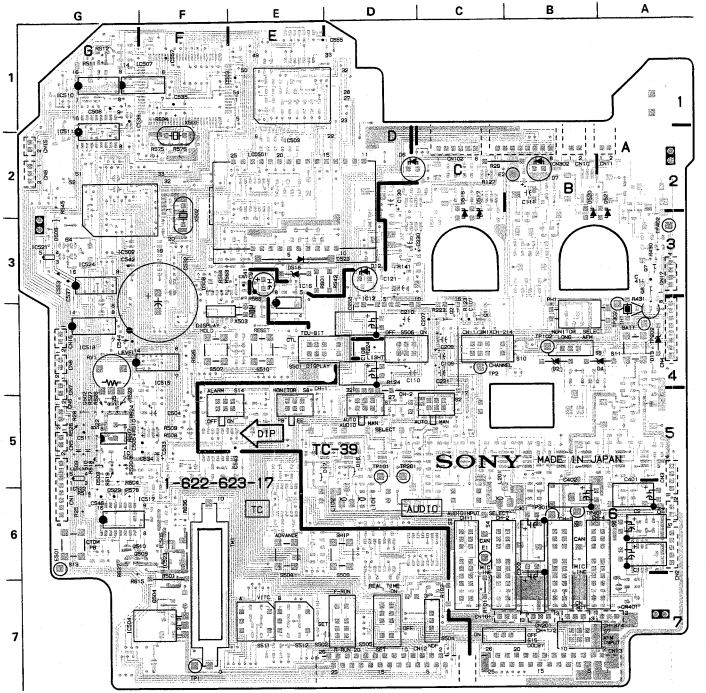
M-1S
T-2S
T-2S

A-4C

F-7C

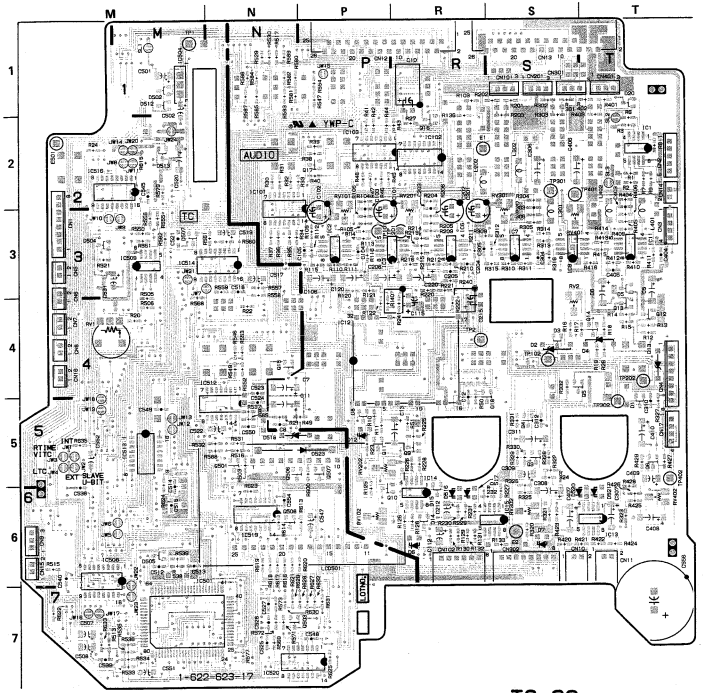
F-7C
M-1S
C-4C
R-4S
01 D-3C
P-3S
02 D-6C
S-4S
101 D-5C
S-3S
102 A-1C
T-4S
101 B-6C
S-3S
102 A-1C
T-5S
101 B-6C
S-2S
102 A-3C
T-5S

11 F-2C
12 F-3C
13 E-4C



TC-39 -COMPONENT SIDE-
1-622-623-17, 18, 19
8VV-5 ---- TC-39
8VV-5PS --- TC-39P

15-10 (d)



TC-39 -SOLDERING SIDE-
1-622-623-17, 18, 19
8VV-5 ---- TC-39
8VV-5PS --- TC-39P

15-11 (d)

AU-72/72P; AUDIO REC AMPLIFIER

S/N 10661 to 10880

AU-72/72P

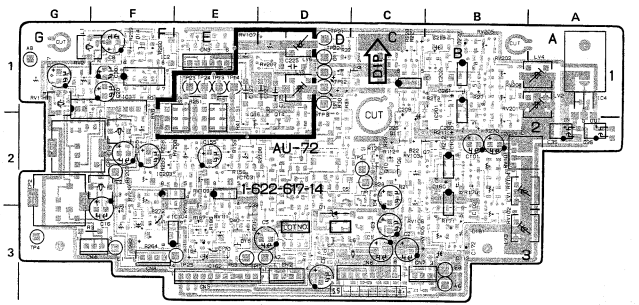
Ref. No.	Type	Pin No.				
		+9V	+5V	GND	−5V	−9V
IC 1	NJM4580M	*				*
IC 2	TC4001BF		14	7		
IC 3	BH1818	1		7		
IC 4	NJM7809A			2		
IC 101	NJM2041M-D	*				*
IC 102	NJM2041M-D	*				*
IC 103	NJM2043M-D		*		*	
IC 104	NJM2043M-D		8		4	
IC 201	NJM2041M-D	*				*
IC 202	NJM2041M-D	*				*
IC 203	NJM2043M-D		*		*	

NOTE: * ····REFER TO SCHEMATIC

AU-72/72P (1-622-617-14)

CN1	B - 2 C	Q31	S - 1 S
	N - 2 S	Q34	Q - 2 S
CN2	D - 2 C	Q36	S - 3 S
	Q - 3 S	Q37	S - 3 S
CN3	F - 1 C	Q38	R - 3 S
	R - 1 S	Q39	E - 3 C
CN4	F - 3 C	Q40	E - 3 C
	S - 2 S	Q41	R - 3 S
CN5	E - 3 C	Q42	R - 2 S
	R - 3 S	Q43	S - 2 S
CN6	C - 2 C	Q44	Q - 2 S
	P - 3 S	Q45	R - 2 S
CN7	C - 3 C	Q46	Q - 2 S
	P - 2 S	Q47	R - 2 S
CN8	F - 3 C	Q48	Q - 2 S
	S - 3 S	Q49	R - 1 S
		Q50	R - 1 S
CP1	G - 2 C	Q51	S - 2 S
CP2	G - 2 C		
		RV1	G - 1 C
D1	D - 3 C	RV2	G - 1 C
	Q - 3 S	RV6	F - 2 C
D2	Q - 3 S	RV101	B - 2 C
D3	Q - 3 S	RV102	B - 3 C
D4	Q - 2 S	RV103	C - 2 C
D5	D - 2 C	RV104	B - 2 C
D6	Q - 1 S	RV105	B - 3 C
D7	Q - 1 S	RV106	C - 2 C
D8	S - 2 S	RV107	E - 1 C
D12	S - 1 S	RV108	E - 2 C
D13	D - 2 C	RV109	E - 2 C
D14	F - 1 C	RV110	E - 2 C
D16	E - 3 C	RV111	E - 3 C
D17	M - 1 S	RV201	B - 1 C
		RV202	B - 1 C
E1	F - 3 C	RV204	B - 1 C
	S - 3 S	RV205	B - 1 C
E2	F - 2 C	RV207	D - 1 C
	S - 2 S	RV208	E - 2 C
E3	B - 3 C	RV209	F - 2 C
	N - 3 S	RV210	F - 2 C
		RV211	F - 3 C
IC1	C - 1 C		
IC2	F - 1 C	S1	E - 1 C
IC3	F - 1 C	S2	E - 1 C
	S - 1 S		
IC4	A - 1 C	SL1	M - 1 S
	M - 1 S		
IC101	B - 2 C	TP1	C - 2 C
IC102	B - 2 C		P - 2 S
IC103	E - 2 C	TP2	C - 2 C
IC104	E - 3 C		P - 2 S
IC201	B - 1 C	TP3	D - 1 C
IC202	B - 1 C		Q - 1 S
IC203	F - 2 C	TP4	G - 3 C
			T - 3 S
LV1	B - 2 C	TP11	D - 1 C
LV2	A - 1 C		Q - 1 S
LV3	B - 3 C	TP12	D - 1 C
LV4	A - 1 C		Q - 1 S
LV5	D - 1 C	TP13	E - 1 C
LV6	D - 1 C		R - 1 S
		TP14	E - 1 C
Q1	Q - 3 S		R - 1 S
Q2	P - 3 S	TP15	E - 3 C
Q3	Q - 3 S		R - 3 S
Q4	Q - 2 S	TP21	D - 1 C
Q5	Q - 2 S		Q - 1 S
Q6	C - 2 C	TP22	D - 1 C
Q7	B - 2 C		Q - 1 S
Q8	P - 2 S	TP23	E - 1 C
Q9	Q - 2 S		R - 1 S
Q10	C - 2 C	TP24	E - 1 C
Q11	C - 2 C		Q - 1 S
Q12	C - 1 C	TP25	E - 3 C
Q13	Q - 2 S		R - 3 S
Q14	D - 2 C		
Q16	E - 2 C		
Q18	R - 1 S		
Q19	R - 1 S		
Q20	R - 3 S		
Q22	S - 1 S		
Q23	S - 1 S		
Q24	S - 1 S		
Q25	T - 1 S		
Q26	S - 1 S		
Q27	T - 1 S		
Q30	S - 1 S		

· C: COMPONENT SIDE
· S: SOLDERING SIDE



AU-72 -COMPONENT SIDE-
1-622-617-14
BVV-S-----AU-72
BVV-SPS----AU-72P

AU-72/72P

AU-72/72P; AUDIO REC AMPLIFIER

S/N 10661 to 10880

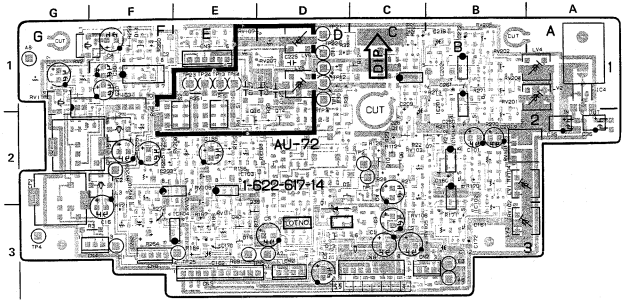
S-1 S
Q-2 S
S-3 S
S-1 S
R-3 S
E-3 C
E-3 C
R-3 S
R-2 S
S-2 S
Q-2 S
R-2 S
Q-2 S
R-1 S
S-2 S

G-1 C
G-1 C
F-2 C
B-2 C
B-1 C
C-2 C
B-2 C
C-2 C
F-1 C
E-2 C
E-2 C
E-2 C
E-2 C
B-1 C
B-1 C
B-1 C
B-1 C
D-1 C
E-2 C
F-2 C
F-2 C
F-3 C

E-1 C
E-1 C

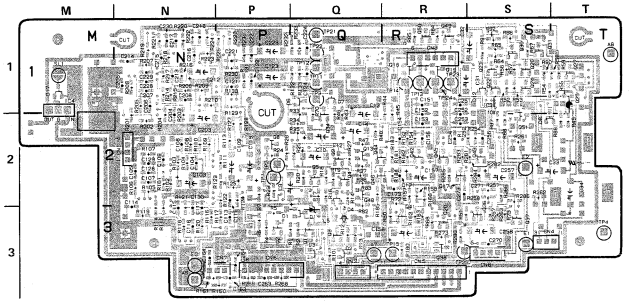
M-1 S

C-2 C
P-2 S
C-2 C
P-2 S
D-1 C
Q-1 S
G-3 C
T-3 S
D-1 C
Q-1 S
D-1 C
Q-1 S
E-1 C
R-1 S
E-1 C
R-1 S
E-3 C
R-3 S
D-1 C
Q-1 S
D-1 C
Q-1 S
E-1 C
R-1 S
E-1 C
Q-1 S
E-3 C
R-3 S



AU-72 -COMPONENT SIDE-
1-522-617-14
BVV-5----AU-72
BVV-5PS----AU-72P

15-18 (a)



AU-72 -SOLDERING SIDE-
1-522-617-14
BVV-5----AU-72
BVV-5PS----AU-72P

15-19 (a)

AU-72/72P: AUDIO REC AMPLIFIER

S/N 10881 and higher

AU-72/72P

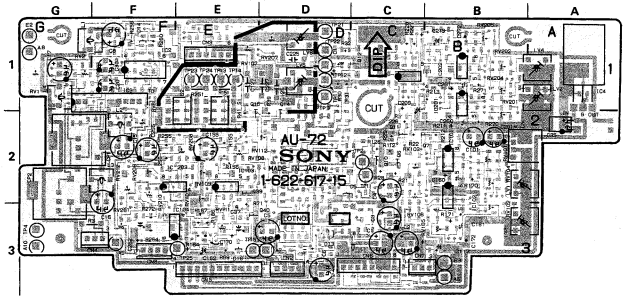
Ref. No.	Type	Pin No. +9V	+5V	GND	−5V	−9V
IC 1	NJM4560M	*		14	7	*
IC 2	TC4001BF				7	
IC 3	BH1810	1			7	
IC 4	RC7809FA				2	
IC 101	NJM2041M-D	*				*
IC 102	NJM2041M-D	*				*
IC 103	NJM2043M-D		*		*	
IC 104	NJM2043M-D		8		4	
IC 201	NJM2041M-D	*				*
IC 202	NJM2041M-D	*				*
IC 203	NJM2043M-D		*		*	

NOTE: *·····REFER TO SCHEMATIC

AU-72/72P (1-622-617-15)

CN1	B - 2 C	Q39	E - 2 C
	N - 2 S	Q40	E - 3 C
CN2	D - 3 C	Q41	R - 3 S
	Q - 3 S	Q42	R - 2 S
CN3	E - 1 C	Q43	S - 2 S
	R - 1 S	Q44	R - 2 S
CN4	F - 3 C	Q45	R - 2 S
	S - 3 S	Q46	Q - 2 S
CN5	E - 3 C	Q47	R - 2 S
	R - 3 S	Q48	Q - 2 S
CN6	C - 3 C	Q49	R - 1 S
	P - 3 S	Q50	R - 1 S
CN7	C - 3 C	Q51	S - 2 S
	P - 3 S		
CN8	F - 3 C	RV1	G - 1 C
	S - 3 S	RV2	G - 1 C
		RV6	F - 2 C
CP1	G - 2 C	RV101	B - 2 C
CP2	G - 2 C	RV102	B - 3 C
		RV103	G - 2 C
D1	Q - 3 S	RV104	B - 2 C
D2	Q - 3 S	RV105	B - 3 C
D3	Q - 2 S	RV106	C - 2 C
D4	Q - 2 S	RV107	E - 1 C
D5	D - 2 C	RV108	E - 2 C
D6	Q - 1 S	RV109	E - 2 C
D7	Q - 1 S	RV110	E - 2 C
D8	S - 2 S	RV111	E - 3 C
D12	S - 1 S	RV112	D - 2 C
D13	D - 3 C	RV201	B - 2 C
D14	F - 1 C	RV202	B - 1 C
D16	F - 3 C	RV204	B - 1 C
D17	M - 1 S	RV205	B - 1 C
		RV207	D - 1 C
E2	G - 1 C	RV208	E - 2 C
	T - 1 S	RV209	F - 2 C
		RV210	F - 2 C
IC1	C - 1 C	RV211	F - 2 C
IC2	F - 1 C	RV212	F - 2 C
IC3	C - 1 C		
	S - 1 S	S1	E - 1 C
IC4	A - 1 C	S2	E - 1 C
	M - 1 S		
IC101	B - 2 C	SL1	M - 1 S
IC102	B - 2 C		
IC103	C - 2 C	TP1	C - 2 C
IC104	E - 3 C		P - 2 S
IC201	B - 1 C	TP2	C - 2 C
IC202	B - 1 C		P - 2 S
IC203	F - 2 C	TP3	D - 1 C
			G - 1 S
LV1	B - 2 C	TP4	G - 3 C
LV2	A - 1 C		T - 3 S
LV3	R - 3 C	TP11	D - 1 C
LV4	A - 1 C		Q - 1 S
LV5	D - 1 C	TP12	D - 1 C
LV6	D - 1 C		Q - 1 S
		TP13	E - 1 C
Q1	Q - 3 S		R - 1 S
Q2	P - 3 S	TP14	E - 1 C
Q3	Q - 3 S		R - 1 S
Q4	Q - 2 S	TP15	E - 3 C
Q5	Q - 2 S		R - 3 S
Q6	C - 2 C	TP21	D - 1 C
Q7	B - 2 C		Q - 1 S
Q8	P - 2 S	TP22	D - 1 C
Q9	Q - 2 S		Q - 1 S
Q10	C - 2 C	TP23	E - 1 C
Q11	C - 2 C		R - 1 S
Q12	C - 1 C	TP24	E - 1 C
Q13	Q - 2 S		R - 1 S
Q14	D - 2 C	TP25	E - 3 C
Q16	E - 2 C		R - 3 S
Q18	R - 1 S		
Q19	R - 1 S		
Q20	R - 3 S		
Q22	S - 1 S		
Q23	S - 1 S		
Q24	S - 1 S		
Q25	T - 1 S		
Q26	S - 1 S		
Q27	T - 1 S		
Q30	S - 1 S		
Q31	S - 1 S		
Q34	Q - 2 S		
Q36	S - 3 S		
Q37	S - 3 S		
Q38	R - 3 S		

- C: COMPONENT SIDE
- S: SOLDERING SIDE



AU-72 -COMPONENT SIDE-

1-622-617-15
BVV-S ---- AU-72
BVV-5PS --- AU-72P

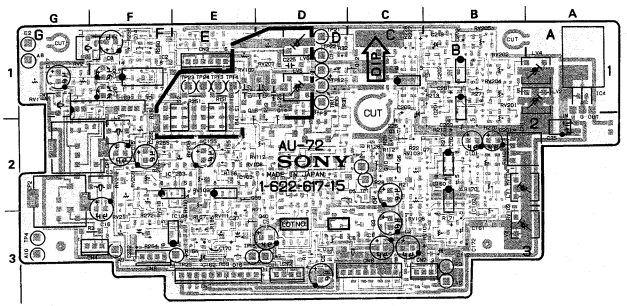
AU-72/72P; AUDIO REC AMPLIFIER

S/N 10881 and higher

622-617-15)

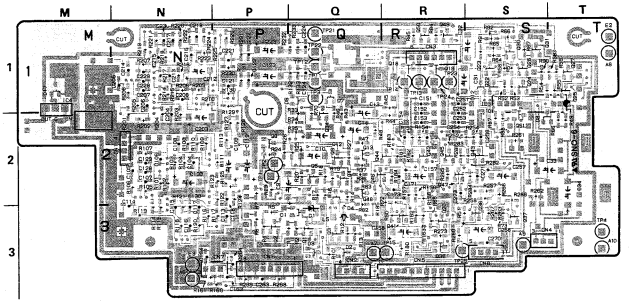
Q39	E - 2 C
Q40	E - 3 C
Q41	R - 3 S
Q42	R - 2 S
Q43	S - 2 S
Q44	R - 2 S
Q45	R - 2 S
Q46	Q - 2 S
Q47	R - 2 S
Q48	Q - 2 S
Q49	R - 1 S
Q50	R - 1 S
Q51	S - 2 S
RV1	G - 1 C
RV2	G - 1 C
RV6	F - 2 C
RV101	B - 2 C
RV102	B - 3 C
RV103	C - 2 C
RV104	B - 2 C
RV105	B - 3 C
RV106	C - 2 C
RV107	E - 1 C
RV108	E - 2 C
RV109	E - 2 C
RV110	F - 2 C
RV111	E - 3 C
RV112	D - 2 C
RV201	B - 2 C
RV202	B - 1 C
RV204	B - 1 C
RV205	B - 1 C
RV207	D - 1 C
RV208	E - 2 C
RV209	F - 2 C
RV210	F - 2 C
RV211	F - 3 C
RV212	F - 2 C
S1	E - 1 C
S2	E - 1 C
SL1	M - 1 S
TP1	C - 2 C
	P - 2 S
TP2	C - 2 C
	P - 2 S
TP3	D - 1 C
	Q - 1 S
TP4	G - 3 C
	T - 3 S
TP11	D - 1 C
	Q - 1 S
TP12	D - 1 C
	Q - 1 S
TP13	E - 1 C
	R - 1 S
TP14	E - 1 C
	R - 1 S
TP15	E - 3 C
	R - 3 S
TP21	D - 1 C
	Q - 1 S
TP22	D - 1 C
	Q - 1 S
TP23	E - 1 C
	R - 1 S
TP24	E - 1 C
	R - 1 S
TP25	E - 3 C
	R - 3 S

PONENT SIDE
DERING SIDE



AU-72 -COMPONENT SIDE-
1-622-617-15
BVV-5 ---- AU-72
BVV-5PS --- AU-72P

15-18 (b)



AU-72 -SOLDERING SIDE-
1-622-617-15
BVV-5 ---- AU-72
BVV-5PS --- AU-72P

15-19 (b)

CT-85, HP-34, PA-53

CT-85: AUDIO LEVEL CONTROL
HP-34: EARPHONE
PA-53: CONFI./PB AMPLIFIER

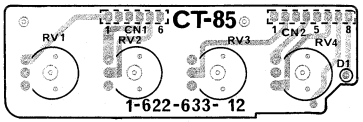
S/N 10661 to 11126

HP-34
-SOLDERING SIDE-
1-622-631-12
BVV-5
BVV-5PS

S/N 11127 and higher

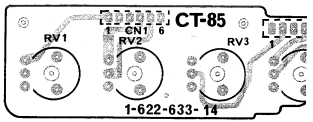
HP-34
-SOLDERING SIDE-
1-622-631-13
BVV-5
BVV-5PS

S/N 10661 to 11126



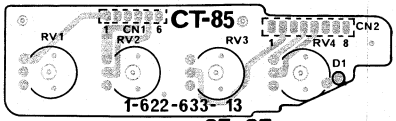
CT-85 -COMPONENT SIDE-
1-622-633-12
BVV-5
BVV-5PS

S/N 13988 and higher



CT-85 -COM
1-622-633-14
BVV-5
BVV-5PS

S/N 11127 to 13987



CT-85 -COMPONENT SIDE-
1-622-633-13
BVV-5
BVV-5PS

CT-85, HP-34, PA-53

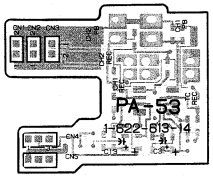
CT-85; AUDIO LEVEL CONTROL
HP-34; EARPHONE
PA-53; CONFI./PB AMPLIFIER

S/N 10661 to 11126

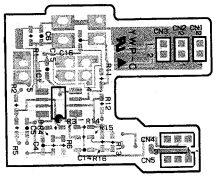
HP-34
-SOLDERING SIDE-
1-622-631-12
BVV-5
BVV-5PS

S/N 11127 and higher

HP-34
-SOLDERING SIDE-
1-622-631-13
BVV-5
BVV-5PS

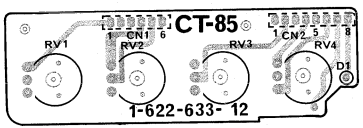


PA-53 -COMPONENT SIDE-
1-622-613-14
BVV-5
BVV-5PS



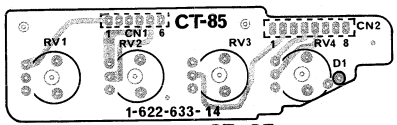
PA-53 -SOLDERING SIDE-
1-622-613-14
BVV-5
BVV-5PS

S/N 10661 to 11126



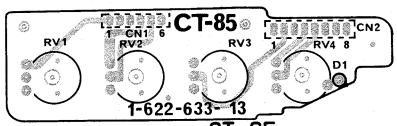
CT-85 -COMPONENT SIDE-
1-622-633-12
BVV-5
BVV-5PS

S/N 13988 and higher



CT-85 -COMPONENT SIDE-
1-622-633-14
BVV-5
BVV-5PS

S/N 11127 to 13987



CT-85 -COMPONENT SIDE-
1-622-633-13
BVV-5
BVV-5PS

SS-31/31P

Ref. No.	Type	Pin No. +12V	+9V	+5V	GND	−5V
IC 1	μPD6111G			*	60	
IC 2	MB88P505H-101PF-5022			*	42	
IC 3	BH1811			*	*	
IC 4	BH1812		22		24	
IC 5	TC4001BF			14	7	
IC 6	TC4051BF			16	7,8	
IC 7	μPC358G2		8			4
IC 8	TLC27M2CPS		8			4
IC 9	NJM2903M			8		4
IC 10	TC4011BF			14	7	
IC 11	TC4053BF			16	8	7
IC 12	NJM2903M	8			4	
IC 13	TLC27M2CPS		8			4
IC 14	TLC27M2CPS			8	4	
IC 15	TC4011BF			14	7	
IC 16	TC4001BF			14	7	
IC 17	TC4030BF			14	7	
IC 18	TC4053BF		16		8	7
IC 19	TLC27M2CPS		8			4
IC 20	TLC27M2CPS		8			4
IC 21	NJM2903M		8		4	
IC 22	TLC27M2CPS		8		4	
IC 23	TC4538BF			16	8	
IC 24	TC304013BF			14	7	
IC 25	TC4053BF			16	7,8	
IC 26	TLC27M2CPS		8			4
IC 27	TC5040138F			14	7	
IC 28	TC4001BF			14	7	
IC 29	TC4011BF			14	7	
IC 30	TC4053BF			7,16	8	
IC 31	TC4011BF			14	7	
IC 32	TC4011BF			14	7	
IC 33	TC4538BF			16	8	
IC 34	TC4538BF			16	8	
IC 35	TLC82CPS		8			4
IC 99	MBM27C64-30CMV			*	*	
IC 201	MB88P551H-201PF-5042			*	10,11,71	
IC 202	TC4512BF			16	8	
IC 203	TC4512BF			16	8	
IC 204	μPD82C43G			24	12	
IC 205	μPD82C43G			24	12	
IC 206	TC40H004F			14	7	
IC 207	TC40H030F			14	7	
IC 208	TC4020BF			16	8	
IC 209	TC4069UBF			14	7	
IC 210	TC4011BF			14	7	
IC 211	TC4538BF			16	8	
IC 212	NJM2903M	8			4	
IC 213	TLC27M2CPS			8		4
IC 214	BH1813	1		9	4	
IC 215	BH1812	1		9	4	
IC 216	TC4069UBF			14	7	
IC 217	TC4011BF			14	7	
IC 220	MBM27C64-20CV			*	*	

NOTE: * ····· REFER TO SCHEMATIC

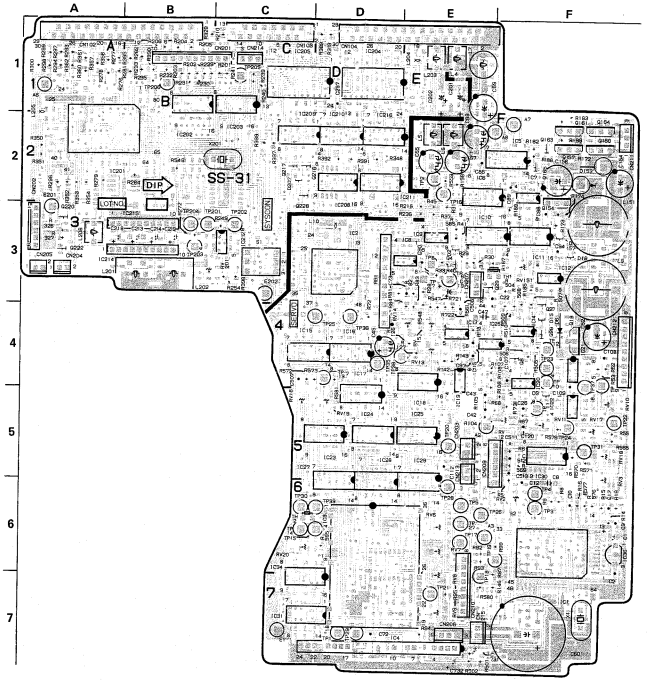
SS-31/31P (1-622-612-14)

CN102	A-1 C	IC3	D-6 C	Q153	S-5 S	TP3	F-6 C
	M-7 S		Q-2 S	Q154	F-2 C		S-2 S
CN103	C-1 C	IC4	D-7 C		S-6 S	TP4	F-6 C
	P-7 S		Q-1 S	Q157	F-2 C		S-2 S
CN104	D-1 C	IC5	F-2 C		S-6 S	TP5	E-6 C
	R-7 S	IC6	F-2 C	Q159	R-7 S		R-2 S
CN201	B-1 C	IC7	F-2 C	Q160	F-2 C	TP6	E-3 C
	N-7 S	IC8	E-3 C		T-6 S		R-5 S
CN202	A-3 C	IC9	E-3 C	Q161	F-2 C	TP7	E-3 C
	M-5 S	IC10	F-3 C		R-6 S		R-5 S
CN203	F-5 C	IC11	F-3 C	Q163	F-2 C	TP8	E-3 C
	R-3 S	IC12	F-3 C	Q164	F-2 C		R-5 S
CN204	A-3 C	IC13	E-4 C		S-6 S	TP9	F-4 C
	M-5 S	IC14	F-4 C	Q165	F-2 C		T-4 S
CN205	A-3 C	IC15	C-4 C	Q166	S-6 S	TP10	F-4 C
	M-5 S	IC16	D-4 C	Q167	S-5 S		S-4 S
CN206	E-7 C	IC17	D-5 C	Q201	P-7 S	TP11	F-5 C
	R-1 S	IC18	E-4 C	Q202	N-6 S		S-3 S
CN207	F-3 C	IC19	E-4 C	Q203	N-7 S	TP12	F-4 C
	R-5 S	IC20	F-4 C	Q204	N-6 S		S-4 S
CN209	F-4 C	IC21	F-4 C	Q206	Q-7 S	TP13	D-4 C
	S-3 S	IC22	F-5 C	Q207	Q-6 S		S-4 S
CN210	F-7 C	IC23	D-5 C	Q208	Q-6 S	TP14	C-6 C
	P-1 S	IC24	D-5 C	Q209	N-7 S		P-2 S
CN211	F-2 C	IC25	E-5 C	Q210	P-7 S	TP15	D-6 C
	T-6 S	IC26	F-4 C	Q211	P-7 S		Q-2 S
CN212	F-4 C	IC27	D-5 C	Q212	Q-6 S	TP16	F-2 C
	T-4 S	IC28	D-5 C	Q213	Q-7 S		R-6 S
CN213	E-5 C	IC29	E-5 C	Q214	R-7 S	TP17	E-6 C
	R-3 S	IC30	F-5 C	Q215	Q-7 S		R-2 S
CN214	C-1 C	IC31	C-7 C	Q216	C-2 C	TP18	F-6 C
	P-7 S	IC32	S-1 S	Q217	C-2 C		R-1 S
CN215	F-7 C	IC33	Q-2 S	Q218	P-7 S	TP19	F-6 C
	R-1 S	IC34	C-7 C	Q219	P-6 S		S-2 S
		IC35	T-3 S	Q220	A-3 C	TP20	E-5 C
D1	S-1 S	IC36	F-6 C	Q221	R-7 S		R-2 S
D2	E-3 C		T-2 S	Q222	A-3 C	TP21	E-7 C
D3	F-5 C	IC201	A-2 C	Q223	R-7 S		R-1 S
D4	R-5 S	IC202	B-1 C	Q224	M-6 S	TP22	F-5 C
D5	G-4 S	IC203	C-1 C	Q225	M-6 S		T-3 S
D6	F-4 C	IC204	D-1 C	Q226	M-6 S	TP23	R-2 S
	S-4 S	IC205	C-1 C	Q227	M-5 S		S-4 S
D7	S-3 S	IC206	P-6 S	Q228	C-2 C	TP24	F-5 C
D8	R-4 S	IC207	Q-6 S	Q229	Q-7 S		S-3 S
D9	T-6 S	IC208	D-2 C	Q230	P-6 S	TP25	D-4 C
D12	Q-4 S	IC209	C-2 C	Q231	Q-7 S		Q-4 S
D15	F-4 C	IC210	D-2 C	Q232	Q-7 S	TP26	F-6 C
D16	S-5 S	IC211	D-2 C	Q233	M-7 S		R-2 S
D17	T-5 S	IC212	C-3 C	Q284	P-7 S	TP27	E-6 C
D18	F-3 C	IC213	N-6 S	Q701	P-1 S		R-2 S
D19	S-4 S	IC214	B-3 C	Q711	R-2 S	TP28	E-6 C
D22	S-5 S		N-5 S	Q712	R-3 S		R-2 S
D23	T-5 S	IC215	B-3 C	Q713	R-3 S	TP29	D-7 C
D24	R-4 S		N-5 S	Q731	R-1 S		Q-1 S
D26	R-3 S	IC216	D-2 C	Q732	S-1 S	TP30	E-6 C
D27	Q-1 S	IC217	M-6 S				P-2 S
D28	S-6 S			RB1	D-3 C	TP31	F-5 C
D29	S-6 S	Q2	R-5 S				T-3 S
D152	S-5 S	Q3	R-5 S	RV2	F-6 C	TP33	D-6 C
D153	F-2 C	Q4	E-3 C	RV3	F-5 C		Q-2 S
	T-6 S	Q5	R-5 S	RV6	E-6 C	TP35	D-4 C
D156	S-6 S	Q7	S-4 S	RV7	E-6 C		Q-4 S
D157	F-3 C	Q8	F-4 C	RV8	E-6 C	TP36	D-4 C
D201	R-6 S	Q12	Q-5 S	RV9	E-7 C		Q-4 S
D202	N-6 S	Q13	Q-5 S	RV10	F-5 C	TP37	F-4 C
D203	N-6 S	Q14	R-4 S	RV11	F-5 C		T-4 S
D204	Q-6 S	Q15	S-5 S	RV12	F-5 C	TP38	E-4 C
D205	P-6 S	Q16	S-4 S	RV13	E-4 C		R-4 S
D206	P-6 S	Q17	S-4 S	RV14	E-4 C	TP201	B-3 C
D207	C-2 C	Q18	F-4 C	RV15	E-4 C		N-5 S
D208	Q-7 S		S-4 S	RV16	C-5 C	TP202	C-3 C
D211	M-6 S	Q20	P-5 S	RV17	F-5 C		N-5 S
D212	P-5 S	Q26	F-4 C	RV18	F-5 C	TP203	B-3 C
D213	P-7 S	Q27	F-3 C	RV19	D-5 C		N-5 S
D214	M-6 S	Q28	T-5 S	RV20	C-6 C	TP204	B-3 C
D701	Q-1 S	Q29	F-3 C	RV151	F-3 C		N-5 S
D711	R-2 S	Q30	S-4 S	RV201	B-3 C	TP205	C-1 C
D721	Q-4 S	Q32	R-6 S				P-7 S
		Q33	S-6 S	S1	C-3 C	TP206	B-1 C
E1	C-7 C	Q37	S-5 S				N-7 S
	P-1 S	Q38	R-3 S	TH1	F-3 C		
E201	A-3 C	Q40	Q-2 S		S-5 S	X1	F-7 C
	M-5 S	Q41	Q-4 S	TH2	C-2 C	X201	C-2 C
E202	C-3 C	Q42	T-3 S				
	P-5 S	Q43	R-2 S	TP1	D-7 C		
		Q44	Q-1 S		S-1 S		
IC1	F-6 C	Q151	T-5 S	TP2	E-2 C		
IC2	D-3 C	Q152	T-5 S		R-6 S		

- C: COMPONENT SIDE
- S: SOLDERING SIDE

15-27 (a)

SS-31/P, DUS-256; SERVO SYSTEM
SYSTEM CONTROL S/N 10660 to 10880



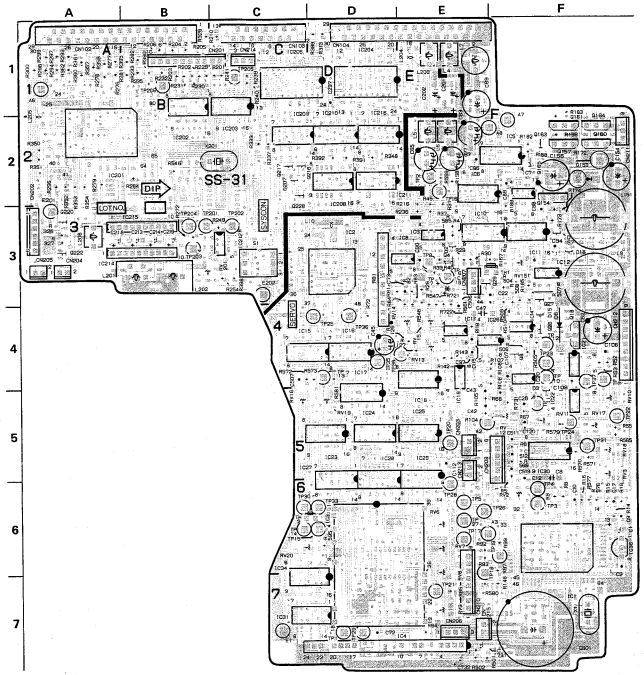
SS-31 -COMPONENT SIDE-
1-622-612-14
BVV-5 ---- SS-31
BVV-5PS --- SS-31P

DUS-256
-SOLDERING SIDE-
1-626-530-11
BVV-5
BVV-5PS

15-28 (a)

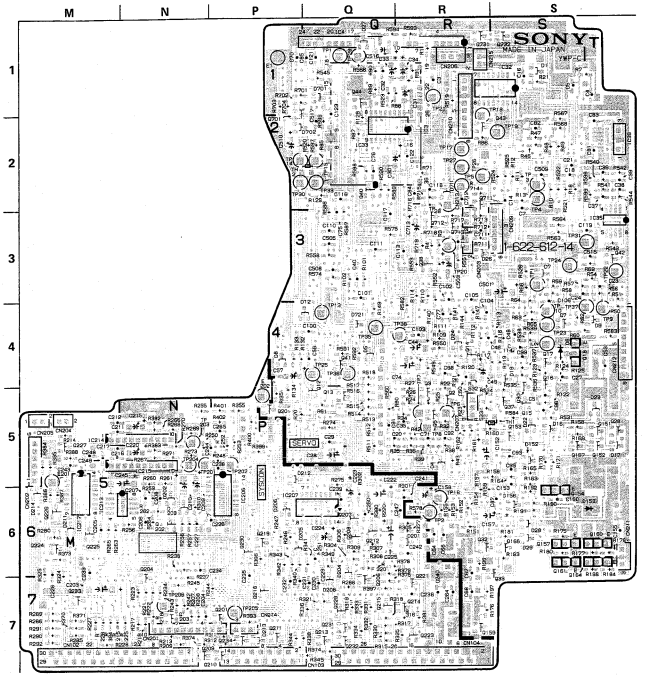
SS-31/31P, DUS-256

SS-31/31P, DUS-256; SERVO SYSTEM
SYSTEM CONTROL S/N 10660 to 10880



SS-31 -COMPONENT SIDE-
1-622-612-14
BVV-5 ---- SS-31
BVV-5PS --- SS-31P

DUS-256
-SOLDERING SIDE-
1-626-530-11
BVV-5
BVV-5PS



SS-31 -SOLDERING SIDE-
1-622-612-14
BVV-5 ---- SS-31
BVV-5PS --- SS-31P

15-28 (a)

15-29 (a)

SS-31/31P; SERVO SYSTEM
SYSTEM CONTROL

S/N 10881 to 11506

SS-31/31P

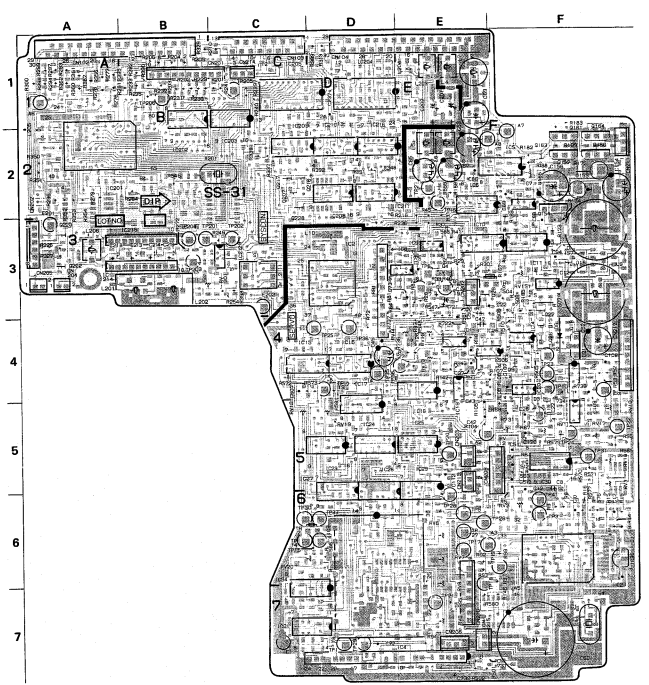
Ref. No.	Type	Pin No. +12V	+9V	+5V	GND	-5V
IC 1	μPD5111G			*	60	
IC 2	MB88P505H-101PF-5022			*	42	
IC 3	BH1811			*	*	
IC 4	BH1812		22		24	
IC 5	TC4001BF			14	7	
IC 6	TC4051BF			16	7,8	
IC 7	μPC339G2		8			4
IC 8	TLC27M2CPS		8			4
IC 9	NJM2903M			8		4
IC 10	TLC271M2CPS		8		4	
IC 11	TC4053BF			16	8	7
IC 12	NJM2903M	8			4	
IC 13	TLC27M2CPS		8			4
IC 14	TLC27M2CPS			8	4	
IC 15	TC4011BF			14	7	
IC 16	TC4001BF			14	7	
IC 17	TC4030BF			14	7	
IC 18	TC4053BF		16		8	7
IC 19	TLC27M2CPS		8			4
IC 20	TLC27M2CPS		8			4
IC 21	NJM2903M		8		4	
IC 22	TLC27M2CPS		8		4	
IC 23	TC4538BF			16	8	
IC 24	TC504013BF			14	7	
IC 25	TC4052BF			16	7,8	
IC 26	TLC27M2CPS		8			4
IC 27	TC504013BF			14	7	
IC 28	TC4011BF			14	7	
IC 29	TC4011BF			14	7	
IC 30	TC4053BF			16	8	
IC 31	TC4011BF			14	7	
IC 32	TC4011BF			14	7	
IC 33	TC4538BF			16	8	
IC 34	TC4538BF			16	8	
IC 35	TL082CPS		8			4
IC 36	M5M27C64-30CMV			*	*	
IC 201	MB88P951H-201PF-5042			*	8	10,11,73
IC 202	TC4512BF			16	8	
IC 203	TC4512BF			16	8	
IC 204	μPD82C43G			24	12	
IC 205	μPD82C43G			24	12	
IC 206	TC40H004F			14	7	
IC 207	TC40H030F			14	7	
IC 208	TC4012BF			16	8	
IC 209	TC4069UBF			14	7	
IC 210	TC4011BF			14	7	
IC 211	TC4538BF			16	8	
IC 212	NJM2903M	8			4	
IC 213	TLC27M2CPS			8		4
IC 214	BH1813	1		9	4	
IC 215	BH1813			9	4	
IC 216	TC4069UBF			14	7	
IC 217	TC4011BF			14	7	
IC 220	MBM27C64-30CV			*	*	

NOTE: * ····· REFER TO SCHEMATIC

SS-31/31P (1-622-612-15)

CN102	A - 1 C	IC2	D - 3 C	Q151	T - 5 S	TP1	D - 7 C
	M - 7 S	IC3	D - 6 C	Q152	T - 5 S		Q - 1 S
CN103	C - 1 C		Q - 2 S	Q153	S - 5 S	TP2	E - 2 C
	P - 7 S	IC4	D - 7 C	Q154	F - 2 C		R - 6 S
CN104	D - 1 C		Q - 1 S		S - 6 S	TP3	F - 6 C
	R - 7 S	IC5	F - 2 C	Q157	F - 2 C		S - 2 S
CN201	B - 1 C	IC6	F - 2 C		S - 6 S	TP4	F - 6 C
	N - 7 S	IC7	F - 3 C	Q159	R - 7 S		S - 2 S
CN202	A - 1 C	IC8	E - 3 C	Q160	F - 2 C	TP5	E - 2 C
	M - 5 S	IC9	E - 3 C		T - 6 S		R - 5 S
CN203	F - 5 C	IC10	F - 3 C	Q161	F - 2 C	TP6	E - 3 C
	R - 3 S	IC11	F - 3 C		S - 6 S		R - 5 S
CN204	A - 3 C	IC12	F - 3 C	Q163	F - 2 C	TP7	E - 3 C
	M - 5 S	IC13	E - 4 C	Q164	F - 2 C		R - 5 S
CN205	A - 3 C	IC14	F - 4 C		S - 6 S	TP8	E - 3 C
	M - 5 S	IC15	C - 4 C	Q165	F - 2 C		R - 5 S
CN206	E - 7 C	IC16	D - 4 C	Q166	S - 6 S	TP9	F - 4 C
	R - 1 S	IC17	D - 5 C	Q167	S - 5 S		T - 4 S
CN207	F - 3 C	IC18	E - 4 C	Q201	P - 7 S	TP10	F - 4 C
	R - 5 S	IC19	F - 4 C	Q202	N - 6 S		S - 4 S
CN209	F - 5 C	IC20	F - 4 C	Q203	N - 7 S	TP11	F - 5 C
	S - 3 S	IC21	F - 4 C	Q204	N - 6 S		S - 3 S
CN210	F - 7 C	IC22	F - 5 C	Q206	Q - 7 S	TP12	F - 5 C
	R - 1 S	IC23	D - 5 C	Q207	Q - 6 S		S - 4 S
CN211	F - 2 C	IC24	D - 5 C	Q208	Q - 6 S	TP13	D - 4 C
	T - 6 S	IC25	F - 5 C	Q209	N - 7 S		Q - 4 S
CN212	F - 4 C	IC26	F - 4 C	Q210	P - 7 S	TP14	C - 6 C
	T - 4 S	IC27	D - 5 C	Q211	P - 7 S		Q - 2 S
CN213	F - 1 C	IC28	D - 3 C	Q212	Q - 6 S	TP15	D - 6 C
	R - 3 S	IC29	E - 5 C	Q213	Q - 7 S		Q - 2 S
CN214	C - 1 C	IC30	F - 5 C	Q214	R - 7 S	TP16	F - 2 C
	P - 7 S	IC31	C - 7 C	Q215	S - 7 S		R - 6 S
CN215	F - 7 C	IC32	S - 1 S	Q216	C - 2 C	TP17	E - 6 C
	R - 1 S	IC33	Q - 2 S	Q217	C - 2 C		R - 2 S
		IC34	Q - 1 C	Q218	P - 7 S	TP18	F - 6 C
D1	S - 1 S	IC35	T - 3 S	Q219	P - 6 S		R - 1 S
D2	E - 3 C	IC36	F - 6 C	Q220	A - 3 C	TP19	F - 6 C
D3	F - 5 C		T - 2 S	Q221	R - 7 S		S - 2 S
D4	R - 5 S	IC201	A - 2 C	Q222	A - 3 C	TP20	E - 5 C
D5	A - 4 S	IC202	B - 1 C	Q223	R - 7 S		R - 3 S
D6	F - 4 C	IC203	C - 1 C	Q224	M - 6 S	TP21	E - 7 C
	S - 4 S	IC204	D - 1 C	Q225	M - 6 S		R - 1 S
D7	S - 5 S	IC205	F - 1 C	Q226	M - 5 S	TP22	F - 7 C
D8	P - 4 S	IC206	P - 6 S	Q227	M - 5 S		T - 3 S
D9	T - 4 S	IC207	Q - 6 S	Q228	C - 2 C	TP23	F - 7 C
D12	Q - 4 S	IC208	Q - 2 C	Q229	C - 2 C		S - 4 S
D15	F - 4 C	IC209	C - 2 C	Q230	P - 6 S	TP24	F - 5 C
D16	S - 5 S	IC210	D - 2 C	Q231	Q - 7 S		S - 3 S
D17	T - 5 S	IC211	D - 2 C	Q232	Q - 7 S	TP25	D - 4 C
D18	F - 3 C	IC212	C - 3 C	Q233	M - 7 S		Q - 4 S
D19	S - 4 S	IC213	N - 6 S	Q234	P - 7 S	TP26	F - 6 C
D22	S - 5 S	IC214	B - 3 C	Q701	P - 1 S		R - 2 S
D23	T - 5 S		N - 5 S	Q711	R - 2 S	TP27	E - 6 C
D24	R - 4 S	IC215	B - 3 C	Q712	R - 2 S		R - 2 S
D27	Q - 1 S		N - 5 S	Q713	R - 3 S	TP28	E - 6 C
D28	S - 6 S	IC216	D - 2 C	Q731	R - 1 S		R - 2 S
D29	S - 6 S	IC217	M - 6 S	Q732	S - 1 S	TP29	D - 7 C
D30	S - 3 S						Q - 1 S
D152	S - 5 S	Q2	R - 5 S	RB1	D - 3 C	TP30	C - 6 C
D153	F - 2 C	Q3	R - 5 S				P - 2 S
	T - 6 S	Q4	E - 3 C	RV2	F - 6 C	TP31	F - 5 C
D156	S - 6 S	Q5	R - 5 S	RV3	F - 5 C		T - 3 S
D157	F - 3 C	Q7	S - 4 S	RV6	E - 6 C	TP33	D - 6 C
D201	R - 6 S	Q9	F - 4 C	RV7	E - 6 C		Q - 2 S
D202	N - 6 S	Q10	R - 4 S	RV8	E - 6 C	TP35	D - 4 C
D203	N - 6 S	Q12	Q - 5 S	RV9	E - 7 C		Q - 4 S
D204	Q - 6 S	Q13	Q - 5 S	RV10	F - 5 C	TP36	D - 4 C
D205	P - 6 S	Q14	R - 4 S	RV11	F - 5 C		Q - 4 S
D206	P - 6 S	Q15	S - 5 S	RV12	F - 5 C	TP38	E - 4 C
D207	C - 2 C	Q16	S - 4 S	RV13	E - 4 C		R - 4 S
D208	Q - 7 S	Q17	S - 4 S	RV14	E - 4 C	TP201	B - 3 C
D211	M - 6 S	Q18	F - 4 C	RV15	E - 4 C		N - 5 S
D212	P - 5 S		S - 4 S	RV16	C - 5 C	TP202	C - 3 C
D213	P - 7 S	Q20	P - 5 S	RV17	F - 5 C		N - 5 S
D214	M - 6 S	Q26	F - 4 C	RV18	F - 5 C	TP203	B - 3 C
D701	Q - 1 S	Q27	F - 3 C	RV19	D - 5 C		N - 5 S
D702	P - 2 S	Q28	T - 3 S	RV20	C - 6 C	TP204	B - 3 C
D711	R - 2 S	Q29	F - 3 C	RV151	F - 3 C		N - 5 S
D721	Q - 4 S	Q30	S - 4 S	RV201	B - 3 C	TP205	C - 1 C
		Q32	R - 6 S				P - 7 S
E1	C - 7 C	Q33	S - 6 S	S1	C - 3 C	TP206	B - 1 C
	P - 1 S	Q37	S - 5 S				N - 7 S
E201	A - 3 C	Q38	R - 3 S	TH1	F - 3 C		
	M - 5 S	Q40	Q - 2 S		S - 5 S	X1	F - 7 C
E202	C - 3 C	Q41	Q - 4 S	TH2	C - 6 C	X201	C - 2 C
	P - 5 S	Q42	T - 3 S		P - 2 S		
		Q43	R - 2 S				
IC1	F - 6 C	Q44	Q - 1 S				

· C: COMPONENT SIDE
· S: SOLDERING SIDE

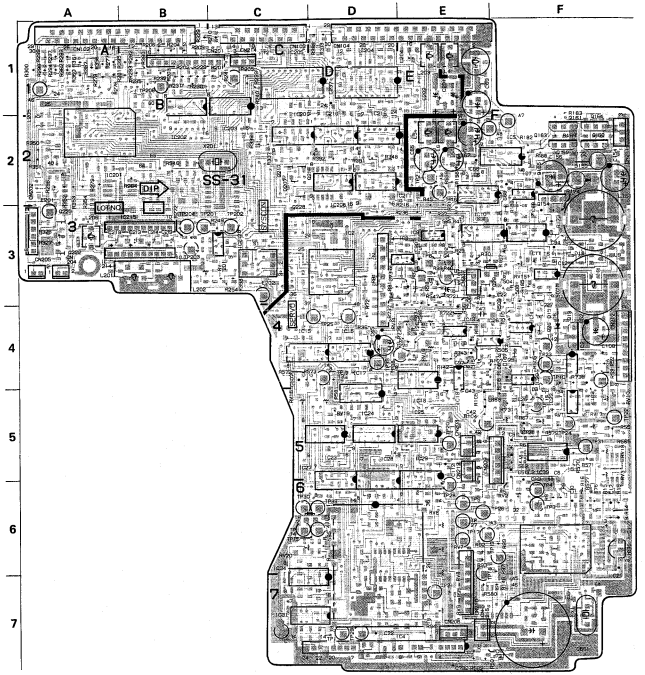


SS-31 -COMPONENT SIDE-
1-622-612-15
ØVV-5 ---- SS-31
ØVV-5PS --- SS-31P

SS-31/31P; SERVO SYSTEM
SYSTEM CONTROL

S/N 10881 to 11506

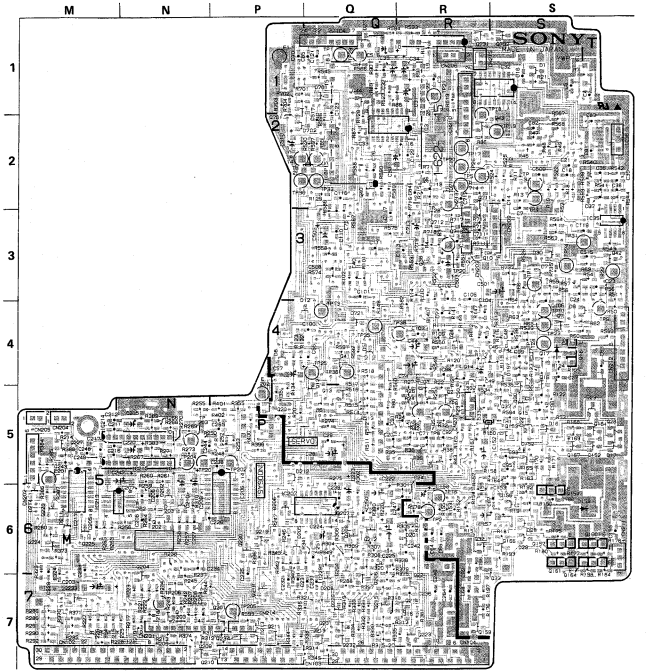
TP1	D-7C
TP2	Q-1S
	E-2C
	R-6S
TP3	F-6C
	S-2S
TP4	F-6C
	S-2S
TP5	E-6C
	R-2S
TP6	E-3C
	R-3S
TP7	E-3C
	R-3S
TP8	E-3C
	R-5S
TP9	F-4C
	T-4S
TP10	F-4C
	S-4S
TP11	F-5C
	S-3S
TP12	F-4C
	S-6S
TP13	D-4C
	Q-4S
TP14	C-6C
	P-2S
TP15	D-6C
	Q-2S
TP16	F-2C
	R-6S
TP17	E-6C
	R-2S
TP18	F-6C
	R-1S
TP19	F-6C
	S-2S
TP20	E-5C
	R-3S
TP21	E-7C
	R-1S
TP22	F-5C
	T-3S
TP23	F-4C
	S-4S
TP24	F-5C
	S-3S
TP25	D-4C
	Q-4S
TP26	F-6C
	R-2S
TP27	E-6C
	R-2S
TP28	E-6C
	R-2S
TP29	D-7C
	Q-1S
TP30	C-1C
	P-2S
TP31	F-5C
	T-3S
TP33	D-6C
	Q-2S
TP35	D-4C
	Q-1S
TP36	D-4C
	Q-4S
TP38	E-4C
	R-4S
TP201	B-3C
	N-5S
TP202	B-3C
	P-5S
TP203	B-3C
	N-5S
TP204	B-3C
	N-5S
TP205	C-1C
	P-7S
TP206	B-1C
	N-7S
X1	F-7C
X201	C-2C



SS-31 -COMPONENT SIDE-

1-622-612-15
BVV-5 ---- SS-31
BVV-5PS --- SS-31P

15-28 (b)



SS-31 -SOLDERING SIDE-

1-622-612-15
BVV-5 ---- SS-31
BVV-5PS --- SS-31P

15-29 (b)

SS-31/31P, DUS-296; SERVO SYSTEM
SYSTEM CONTROL S/N 11507 to 14357

SS-31/31P

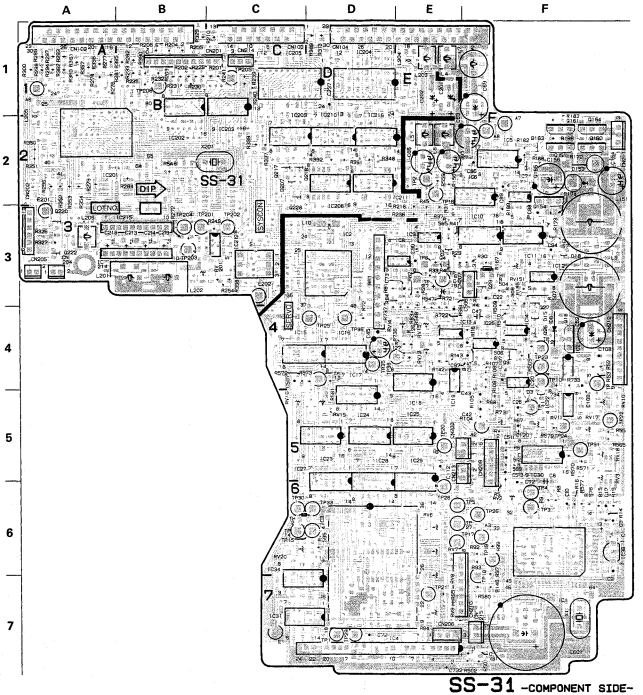
Ref. No.	Type	Pin No. +12V	+9V	+5V	GND	−5V
IC 1	μPD6111G			*	60	
IC 2	MB88505-1014M			*	42	
IC 3	BH1611			*	*	
IC 4	BH1612		22		24	
IC 5	TC4001BF			14	7	
IC 6	TC4051BF			16	7,8	
IC 7	μPC358G2		8			4
IC 8	TLC27M2CPS		8		8	4
IC 9	NJM2903M			8		4
IC 10	TC4011BF			14	7	
IC 11	TC4053BF			16	8	7
IC 12	NJM2903M	8			4	
IC 13	TLC27M2CPS		8		8	4
IC 14	TLC27M2CPS			8	4	
IC 15	TC4011BF			14	7	
IC 16	TC4001BF			14	7	
IC 17	TC4030BF			14	7	
IC 18	TC4053BF		16		8	7
IC 19	TLC27M2CPS		8		8	4
IC 20	TLC27M2CPS		8		8	4
IC 21	NJM2903M		8		4	
IC 22	TLC27M2CPS		8		4	
IC 23	TC4538BF			16	8	
IC 24	TC5040139F			14	7	
IC 25	TC4053BF			16	7,8	
IC 26	TLC27M2CPS		8		4	4
IC 27	TC5040139F			14	7	
IC 28	TC4001BF			14	7	
IC 29	TC4011BF			14	7	
IC 30	TC4053BF			7,16	8	
IC 31	TC4011BF			14	7	
IC 32	TC4011BF			14	7	
IC 33	TC4538BF			16	8	
IC 34	TC4538BF			16	8	
IC 35	TL082CPS		8			4
IC 99	MBM27C64-35CMV			*	*	
IC 201	MB88551-323M			*	10,11,21	
IC 202	TC4538BF			16	8	
IC 203	TC4512BF			16	8	
IC 204	μPD82C43G			24	12	
IC 205	μPD82C43G			24	12	
IC 206	TC40H004F			14	7	
IC 207	TC40H393F			14	7	
IC 208	TC4020BF			16	8	
IC 209	TC4069UBF			14	7	
IC 210	TC4011BF			14	7	
IC 211	TC4538BF			16	8	
IC 212	NJM2903M	8			4	
IC 213	TLC27M2CPS		8			4
IC 214	BH1613	1		9	4	
IC 215	BH1613	1		9	4	
IC 216	TC4069UBF			14	7	
IC 217	TC4011BF			14	7	
IC 220	MBM27C64-35CV			*	*	

NOTE; *·····REFER TO SCHEMATIC

SS-31/31P (1-622-612-16)

CN102	A - 1 C	IC2	D - 3 C	Q151	T - 5 S	TP1	D - 7 C
	M - 7 S	IC3	D - 6 C	Q152	T - 5 S		Q - 1 S
CN103	C - 1 C		Q - 2 S	Q153	S - 5 S	TP2	F - 2 C
	P - 7 S	IC4	D - 7 C	Q154	F - 2 C		R - 6 S
CN104	E - 1 C		Q - 1 S		S - 6 S	TP3	F - 6 C
	R - 7 S	IC5	F - 2 C	Q157	F - 2 C		S - 2 S
CN201	B - 1 C	IC6	F - 2 C		S - 6 S	TP4	F - 6 C
	N - 7 S	IC7	F - 2 C	Q159	R - 7 S		S - 2 S
CN202	A - 3 C	IC8	E - 3 C	Q160	F - 2 C	TP5	F - 6 C
	M - 5 S	IC9	E - 3 C		T - 5 S		R - 2 S
CN203	F - 5 C	IC10	F - 3 C	Q161	F - 2 C	TP6	E - 3 C
	R - 3 S	IC11	F - 3 C		S - 6 S		R - 5 S
CN204	A - 3 C	IC12	F - 3 C	Q163	F - 2 C	TP7	E - 3 C
	M - 5 S	IC13	E - 4 C	Q164	F - 2 C		R - 5 S
CN205	A - 3 C	IC14	F - 4 C		T - 6 S	TP8	F - 4 C
	M - 5 S	IC15	C - 4 C	Q165	F - 2 C		R - 5 S
CN206	E - 7 C	IC16	D - 4 C	Q166	S - 6 S	TP9	F - 4 C
	R - 1 S	IC17	D - 5 C	Q167	S - 5 S		T - 4 S
CN207	F - 3 C	IC18	E - 4 C	Q201	P - 7 S	TP10	F - 4 C
	R - 5 S	IC19	E - 4 C	Q202	N - 6 S		S - 4 S
CN209	F - 5 C	IC20	F - 4 C	Q203	N - 7 S	TP11	F - 5 C
	S - 3 S	IC21	F - 4 C	Q204	N - 7 S		S - 3 S
CN210	F - 7 C	IC22	F - 5 C	Q206	Q - 7 S	TP12	F - 4 C
	R - 1 S	IC23	D - 5 C	Q207	Q - 6 S		S - 4 S
CN211	F - 2 C	IC24	D - 5 C	Q208	Q - 6 S	TP13	D - 4 C
	T - 6 S	IC25	E - 5 C	Q209	N - 7 S		R - 4 S
CN212	F - 4 C	IC26	F - 4 C	Q210	P - 7 S	TP14	C - 6 C
	T - 4 S	IC27	D - 6 C	Q211	P - 7 S		P - 2 S
CN213	F - 5 C	IC28	D - 6 C	Q212	Q - 6 S	TP15	D - 6 C
	R - 3 S	IC29	E - 6 C	Q213	Q - 7 S		Q - 2 S
CN214	C - 1 C	IC30	F - 5 C	Q214	Q - 7 S	TP16	E - 2 C
	P - 1 S	IC31	C - 7 C	Q215	Q - 7 S		R - 2 S
CN215	F - 7 C	IC32	S - 1 S	Q216	C - 2 C	TP17	E - 6 C
	R - 1 S	IC33	Q - 2 S	Q217	C - 2 C		R - 2 S
		IC34	C - 7 C	Q218	P - 7 S	TP18	F - 6 C
D1	S - 1 S	IC35	T - 3 S	Q219	P - 6 S		R - 1 S
D2	E - 3 C	IC36	F - 6 C	Q220	A - 3 C	TP19	F - 6 C
D3	F - 5 C		T - 2 S	Q221	R - 7 S		S - 2 S
D4	R - 5 S	IC201	A - 2 C	Q222	A - 3 C	TP20	E - 5 C
D5	B - 1 C	IC202	B - 1 C	Q223	R - 7 S		R - 3 S
D6	F - 4 C	IC203	C - 1 C	Q224	M - 6 S	TP21	E - 7 C
	S - 4 S	IC204	D - 1 C	Q225	M - 6 S		R - 1 S
D7	S - 3 S	IC205	C - 1 C	Q226	M - 6 S	TP22	F - 3 C
D8	P - 4 S	IC206	P - 6 S	Q227	M - 5 S		T - 3 S
D9	T - 4 S	IC207	Q - 6 S	Q228	C - 2 C	TP23	F - 4 C
D12	Q - 4 S	IC208	D - 2 C	Q229	Q - 7 S		S - 4 S
D15	F - 4 C	IC209	C - 2 C	Q230	P - 6 S	TP24	F - 5 C
D16	S - 5 S	IC210	D - 2 C	Q231	Q - 7 S		S - 3 S
D17	T - 5 S	IC211	D - 2 C	Q232	Q - 7 S	TP25	D - 4 C
D18	F - 3 C	IC212	C - 3 C	Q233	M - 7 S		Q - 4 S
D19	S - 4 S	IC213	N - 6 S	Q234	P - 7 S	TP26	F - 6 C
D22	S - 5 S	IC214	B - 3 C	Q701	P - 1 S		R - 2 S
D23	T - 5 S		N - 5 S	Q711	R - 2 S	TP27	E - 6 C
D24	R - 4 S	IC215	B - 3 C	Q712	R - 3 S		R - 2 S
D27	Q - 1 S		N - 5 S	Q713	R - 3 S	TP28	E - 6 C
D28	S - 6 S	IC216	D - 2 C	Q731	R - 1 S		R - 2 S
D29	S - 6 S	IC217	M - 6 S	Q732	S - 1 S	TP29	R - 7 C
D30	S - 3 S						Q - 1 S
D152	S - 5 S	Q2	R - 5 S	RB1	D - 3 C	TP30	C - 6 C
D153	F - 2 C	Q3	R - 5 S				P - 2 S
	T - 6 S	Q4	E - 3 C	RV2	F - 6 C	TP31	F - 5 C
D156	S - 6 S	Q5	R - 5 S	RV3	E - 6 C		T - 3 S
D157	F - 3 C	Q7	S - 4 S	RV6	E - 6 C	TP33	D - 6 C
D201	R - 6 S	Q8	F - 4 C	RV7	E - 6 C		Q - 2 S
D202	N - 6 S	Q10	R - 3 S	RV8	E - 6 C	TP35	D - 4 C
D203	N - 6 S	Q12	Q - 5 S	RV9	E - 7 C		Q - 4 S
D204	Q - 6 S	Q13	Q - 5 S	RV10	F - 5 C	TP36	D - 4 C
D205	P - 6 S	Q14	R - 4 S	RV11	F - 5 C		Q - 4 S
D206	P - 6 S	Q15	S - 5 S	RV12	F - 5 C	TP38	E - 4 C
D207	C - 2 C	Q16	S - 4 S	RV13	E - 4 C		R - 4 S
D208	Q - 7 S	Q17	S - 4 S	RV14	E - 4 C	TP201	B - 3 C
D211	M - 6 S	Q18	F - 4 C	RV15	E - 4 C		N - 5 S
D212	P - 5 S		S - 4 S	RV16	C - 3 C	TP202	B - 3 C
D213	P - 7 S	Q20	P - 5 S	RV17	F - 5 C		P - 5 S
D214	M - 6 S	Q26	F - 4 C	RV18	F - 5 C	TP203	B - 3 C
D701	Q - 1 S	Q27	F - 3 C	RV19	D - 5 C		N - 5 S
D702	P - 2 S	Q28	T - 5 S	RV20	C - 6 C	TP204	B - 3 C
D711	R - 2 S	Q29	F - 3 C	RV151	F - 3 C		N - 5 S
D721	Q - 4 S	Q30	S - 4 S	RV201	B - 3 C	TP205	C - 1 C
		Q32	R - 6 S				P - 7 S
E1	C - 7 C	Q33	S - 6 S	S1	C - 3 C	TP206	B - 1 C
	P - 1 S	Q37	S - 5 S				N - 7 S
E201	A - 3 C	Q38	R - 3 S	TH1	F - 3 C		
	M - 5 S	Q40	Q - 2 S		S - 5 S	X1	F - 7 C
E202	C - 3 C	Q41	Q - 4 S	TH2	C - 5 C	X201	C - 2 C
	P - 5 S	Q42	T - 3 S		Q - 2 S		
		Q43	R - 2 S				
IC1	F - 6 C	Q44	Q - 1 S				

- C: COMPONENT SIDE
- S: SOLDERING SIDE



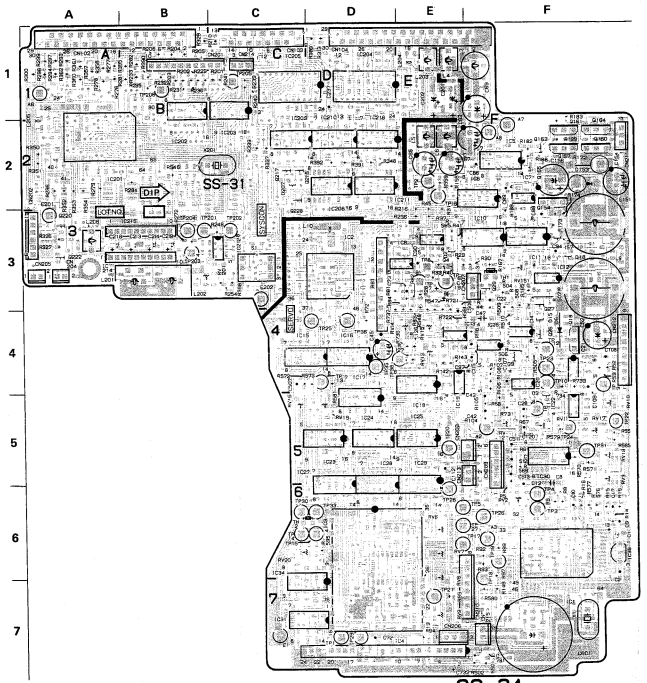
SS-31 -COMPONENT SIDE-
1-622-612-16
BVV-5 ---- SS-31
BVV-5PS --- SS-31P

DUS-296
-SOLDERING SIDE-
1-630-314-11
BVV-5
BVV-5PS

SS-31/31P, DUS-296; SERVO SYSTEM
SYSTEM CONTROL

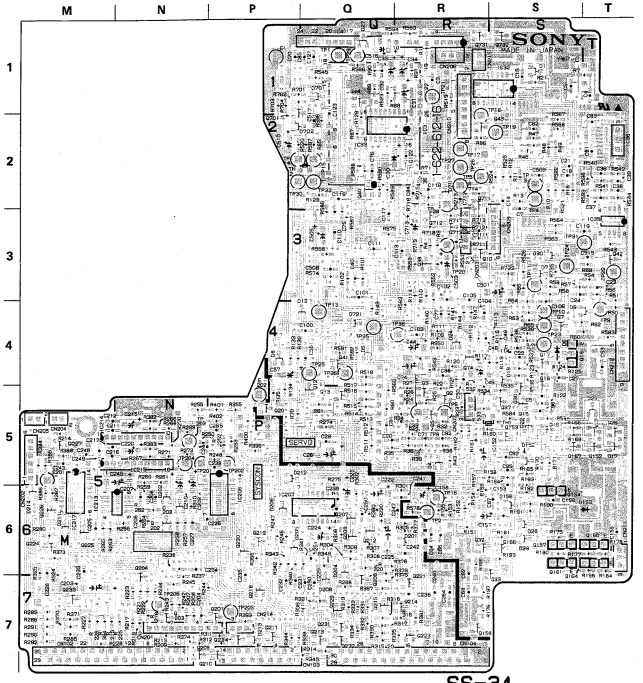
S/N 11507 to 14357

P1	D-7 C	Q-1 S	
P2	E-2 C	R-6 S	
P3	F-6 C	S-2 S	
P4	F-6 C	S-2 S	
P5	E-6 C	R-2 S	
P6	E-3 C	R-5 S	
P7	E-3 C	R-5 S	
P8	E-3 C	R-5 S	
P9	F-4 C	T-4 S	
P10	F-4 C	S-4 S	
P11	F-5 C	S-3 S	
P12	F-4 C	S-4 S	
P13	D-4 C	Q-4 S	
P14	C-6 C	P-2 S	
P15	D-6 C	Q-2 S	
P16	E-2 C	R-6 S	
P17	E-6 C	R-2 S	
P18	F-6 C	R-1 S	
P19	F-6 C	S-2 S	
P20	E-5 C	R-3 S	
P21	E-7 C	R-1 S	
P22	F-5 C	T-3 S	
P23	F-4 C	S-4 S	
P24	F-5 C	S-3 S	
P25	D-4 C	Q-4 S	
P26	F-6 C	R-2 S	
P27	E-6 C	R-2 S	
P28	E-6 C	R-2 S	
P29	D-7 C	Q-1 S	
P30	C-6 C	P-2 S	
P31	F-5 C	T-3 S	
P33	D-6 C	Q-2 S	
P35	D-4 C	Q-4 S	
P36	D-4 C	Q-4 S	
P38	E-4 C	R-4 S	
TP201	B-3 C	N-5 S	
TP202	C-3 C	P-5 S	
TP203	B-3 C	N-5 S	
TP204	B-3 C	N-5 S	
TP205	C-1 C	P-7 S	
TP206	B-1 C	N-7 S	
X1	F-7 C		
X201	C-2 C		



SS-31 -COMPONENT SIDE-
1-622-612-16
8VV-5 ---- SS-31
8VV-5PS --- SS-31P

DUS-296
-SOLDERING SIDE-
1-630-314-11
8VV-5
8VV-5PS



SS-31 -SOLDERING SIDE-
1-622-612-16
8VV-5 ---- SS-31
8VV-5PS --- SS-31P

SS-31/31P; SERVO SYSTEM
SYSTEM CONTROL

S/N 14358 and higher

SS-31/31P

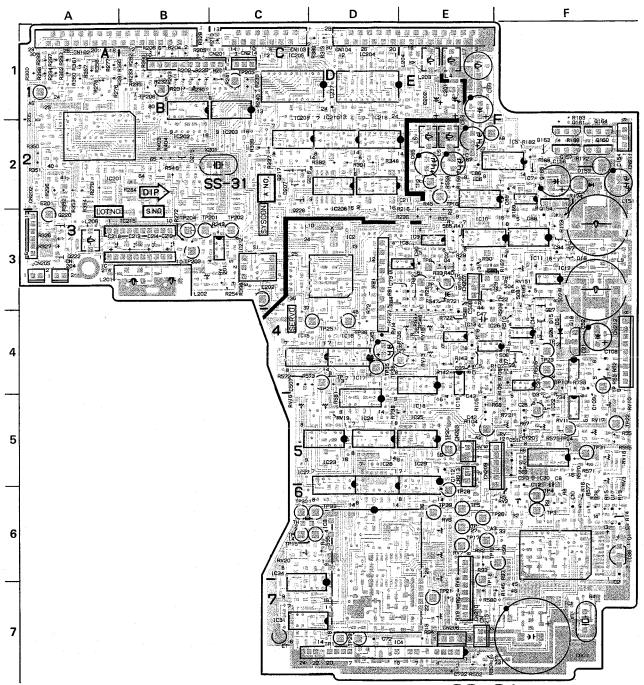
Ref. No.	Type	Pin No. +12V	+9V	+5V	GND	−5V
IC 1	μPD611G			*	60	
IC 2	MB88505-1014M			*	42	
IC 3	BH1811			*	*	
IC 4	BH1812		22		24	
IC 5	MC14001BF			14	7	
IC 6	MC14051BF			16	7,8	
IC 7	μPC358G2		8			4
IC 8	TLC27M2CPS		8			4
IC 9	NJM2903M			8		4
IC 10	MC14011BF			14	7	
IC 11	MC14053BF			16	8	7
IC 12	NJM2903M	8			4	
IC 13	TLC27M2CPS		8			4
IC 14	TLC27M2CPS			8	4	
IC 15	MC14011BF			14	7	
IC 16	MC14011BF			14	7	
IC 17	MC14070BF			14	7	
IC 18	TC4053BF		16		8	7
IC 19	TLC27M2CPS		8			4
IC 20	TLC27M2CPS		8			4
IC 21	NJM2903M		8		4	
IC 22	TLC27M2CPS		8		4	
IC 23	MC14538BF			16	8	
IC 24	TC5040138F			14	7	
IC 25	MC14053BF			16	7,8	
IC 26	TLC27M2CPS		8			4
IC 27	TC5040138F			14	7	
IC 28	MC14001BF			14	7	
IC 29	MC14011BF			14	7	
IC 30	MC14053BF			7,16	8	
IC 31	MC14011BF			14	7	
IC 32	MC14011BF			14	7	
IC 33	MC14538BF			16	8	
IC 34	MC14538BF			16	8	
IC 35	TL082CPS		8			4
IC 36	NJM78L05A			*	*	
IC 201	MB88551-323M			*	30,11,71	
IC 202	MC14512BF			16	8	
IC 203	MC14512BF			16	8	
IC 204	μPD82C43G			24	12	
IC 205	μPD82C43G			24	12	
IC 206	TC4W04F			14	7	
IC 207	TC40H393F			14	7	
IC 208	MC14020BF			16	8	
IC 209	MC14069UBF			14	7	
IC 210	MC14011BF			14	7	
IC 211	MC1453BF			16	8	
IC 212	NJM2903M	8			4	
IC 213	TLC27M2CPS		8			4
IC 214	BH1813	1		9	4	
IC 215	BH1813	1		9	4	
IC 216	MC14069UBF			14	7	
IC 217	MC14011BF			14	7	
IC 220	MBM27C64-30CV			*	*	

NOTE; *·····REFER TO SCHEMATIC

SS-31/31P (1-622-612-17)

CN102	A - 1 C	IC25	E - 5 C	Q218	P - 7 S	TP201	B - 3 C
CN103	C - 1 C	IC26	E - 4 C	Q219	P - 6 S	TP202	C - 3 C
CN104	D - 1 C	IC27	C - 5 C	Q220	A - 3 C	TP203	B - 3 C
CN201	C - 1 C	IC28	D - 5 C	Q221	R - 7 S	TP204	B - 3 C
CN202	A - 2 C	IC29	E - 5 C	Q222	A - 3 C	TP205	C - 1 C
CN203	E - 5 C	IC30	F - 5 C	Q223	R - 7 S	TP206	B - 1 C
CN204	A - 3 C	IC31	C - 7 C	Q224	M - 6 S		
CN205	A - 3 C	IC32	S - 1 S	Q225	M - 6 S	X1	F - 7 C
CN206	E - 7 C	IC33	Q - 2 S	Q226	M - 6 S	X201	C - 2 C
CN207	E - 3 C	IC34	C - 6 C	Q227	M - 5 S		
CN209	E - 5 C	IC35	T - 3 S	Q228	C - 3 C		
CN210	E - 7 C	IC36	G - 6 C	Q229	Q - 7 S		
CN211	G - 2 C	IC201	A - 2 C	Q230	P - 6 S		
CN212	G - 4 C	IC202	B - 2 C	Q231	Q - 7 S		
CN213	E - 5 C	IC203	C - 2 C	Q232	Q - 7 S		
CN214	C - 1 C	IC204	D - 1 C	Q233	M - 7 S		
CN215	E - 7 C	IC205	C - 1 C	Q234	P - 7 S		
		IC206	P - 6 S	Q701	P - 2 S		
D1	S - 1 S	IC207	P - 6 S	Q711	R - 2 S		
D2	E - 3 C	IC208	D - 3 C	Q712	R - 3 S		
D3	F - 5 C	IC209	C - 2 C	Q713	R - 3 S		
D4	R - 1 S	IC210	D - 2 C	Q731	R - 1 S		
D5	Q - 4 S	IC211	E - 2 C	Q732	S - 1 S		
D6	F - 4 C	IC212	C - 3 C	Q733	Q - 4 S		
D7	S - 3 S	IC213	M - 6 S				
D8	P - 4 S	IC214	A - 3 C	RB1	D - 3 C		
D9	S - 4 S	IC215	B - 3 C				
D12	Q - 4 S	IC216	D - 2 C	RV2	F - 6 C		
D15	F - 4 C	IC217	M - 6 S	RV3	G - 5 C		
D16	S - 5 S			RV6	E - 6 C		
D17	T - 5 S	Q2	R - 5 S	RV7	E - 6 C		
D18	F - 2 C	Q3	R - 4 S	RV8	E - 7 C		
D19	S - 4 S	Q4	E - 3 C	RV9	E - 7 C		
D22	S - 5 S	Q5	R - 5 S	RV10	G - 5 C		
D23	T - 5 S	Q7	S - 4 S	RV11	F - 5 C		
D27	Q - 1 S	Q9	F - 4 C	RV12	F - 5 C		
D28	S - 6 S	Q10	R - 3 S	RV13	E - 4 C		
D29	S - 4 S	Q12	Q - 4 S	RV14	D - 4 C		
D30	S - 3 S	Q13	Q - 5 S	RV15	E - 4 C		
D152	S - 5 S	Q14	R - 4 S	RV16	G - 5 C		
D153	G - 2 C	Q15	S - 5 S	RV17	G - 5 C		
D156	S - 6 S	Q16	S - 4 S	RV18	G - 5 C		
D201	R - 6 S	Q17	S - 4 S	RV19	D - 5 C		
D202	N - 6 S	Q18	F - 4 C	RV20	E - 6 C		
D203	N - 6 S	Q20	P - 5 S	RV151	F - 3 C		
D204	Q - 6 S	Q26	F - 4 C	RV201	C - 3 C		
D205	P - 6 S	Q27	F - 4 C				
D206	P - 6 S	Q28	T - 5 S	S1	C - 3 C		
D207	C - 2 C	Q29	F - 3 C				
D208	D - 7 S	Q30	S - 5 S	TH1	F - 3 C		
D211	M - 6 S	Q32	R - 6 S	TH2	C - 6 C		
D212	P - 5 S	Q33	S - 7 S				
D213	P - 7 S	Q37	S - 5 S	TP1	D - 7 C		
D214	M - 6 S	Q38	R - 3 S	TP2	E - 2 C		
D215	B - 2 C	Q40	Q - 2 S	TP3	F - 6 C		
D701	Q - 1 S	Q41	Q - 4 S	TP4	F - 6 C		
D702	Q - 2 S	Q42	T - 3 S	TP5	E - 6 C		
D711	R - 2 S	Q43	S - 2 S	TP6	E - 3 C		
D721	Q - 4 S	Q44	Q - 1 S	TP7	E - 3 C		
		Q151	T - 5 S	TP8	E - 3 C		
E1	C - 7 C	Q152	T - 1 S	TP9	Q - 4 C		
E201	A - 2 C	Q153	S - 5 S	TP10	F - 4 C		
E202	C - 3 C	Q154	F - 3 C	TP11	F - 5 C		
		Q157	F - 2 C	TP12	F - 4 C		
IC1	F - 7 C	Q159	R - 7 S	TP13	D - 4 C		
IC2	D - 8 C	Q160	G - 2 C	TP14	C - 6 C		
IC3	D - 6 C	Q161	F - 2 C	TP15	C - 6 C		
IC4	D - 7 C	Q163	F - 2 C	TP16	E - 2 C		
IC5	F - 2 C	Q164	G - 2 C	TP17	E - 6 C		
IC6	E - 2 C	Q165	F - 2 C	TP18	E - 7 C		
IC7	F - 2 C	Q166	S - 6 S	TP19	E - 6 C		
IC8	E - 3 C	Q167	S - 7 S	TP20	E - 5 C		
IC9	E - 3 C	Q201	P - 7 S	TP21	E - 7 C		
IC10	E - 3 C	Q202	N - 6 S	TP22	G - 5 C		
IC11	F - 3 C	Q203	N - 7 S	TP23	C - 4 C		
IC12	F - 3 C	Q204	N - 6 S	TP24	F - 5 C		
IC13	E - 4 C	Q206	Q - 7 S	TP25	D - 4 C		
IC14	F - 4 C	Q207	Q - 6 S	TP26	F - 6 C		
IC15	C - 4 C	Q208	Q - 6 S	TP27	E - 6 C		
IC16	D - 4 C	Q209	N - 7 S	TP28	E - 6 C		
IC17	D - 4 C	Q210	N - 7 S	TP29	D - 7 C		
IC18	E - 5 C	Q211	P - 7 S	TP30	C - 6 C		
IC19	E - 5 C	Q212	Q - 6 S	TP31	G - 5 C		
IC20	F - 4 C	Q213	Q - 7 S	TP33	D - 6 C		
IC21	F - 4 C	Q214	R - 7 S	TP35	D - 4 C		
IC22	F - 5 C	Q215	Q - 7 S	TP36	D - 4 C		
IC23	D - 5 C	Q216	C - 2 C	TP38	D - 4 C		
IC24	D - 5 C	Q217	C - 2 C	TP39	E - 6 C		

- C; COMPONENT SIDE
- S; SOLDERING SIDE

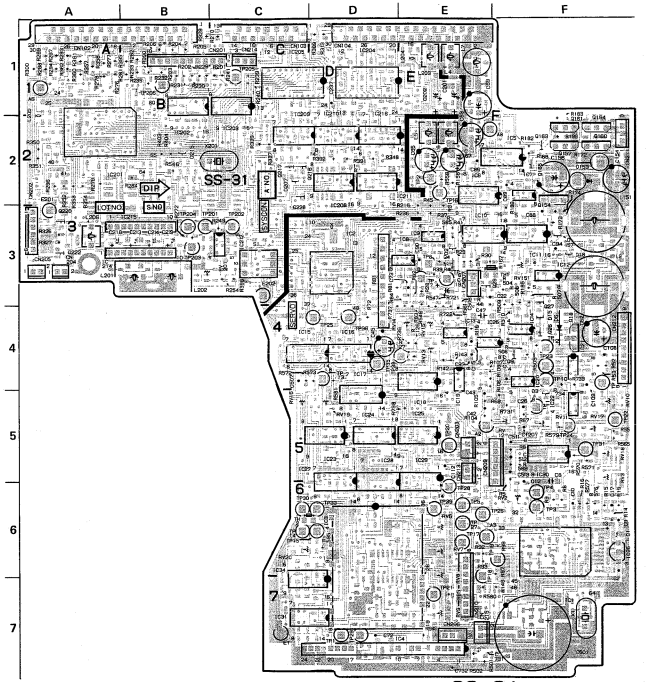


SS-31 -COMPONENT SIDE-
1-622-612-17
BVV-5 ---- SS-31
BVV-5PS --- SS-31P

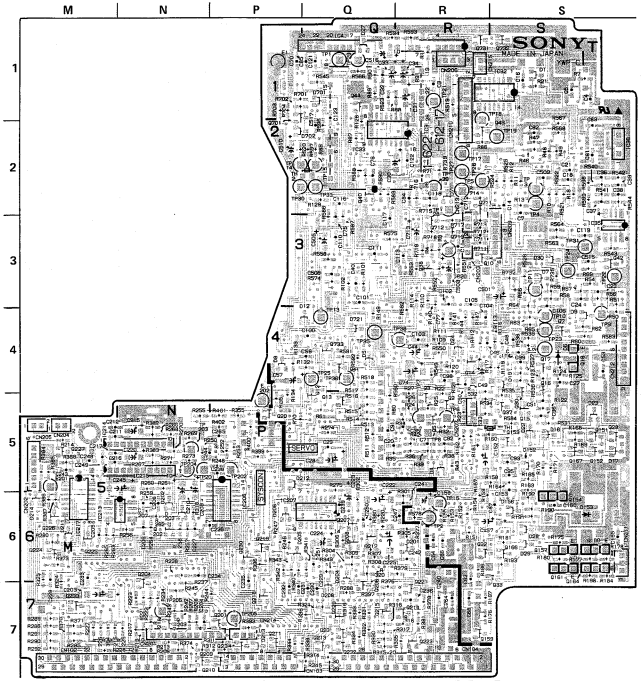
SS-31/31P; SERVO SYSTEM
SYSTEM CONTROL S/N 14358 and higher

P201 B - 3 C
P202 C - 3 C
P203 B - 3 C
P204 B - 3 C
P205 C - 1 C
P206 B - 1 C

J F - 7 C
201 C - 2 C



SS-31 -COMPONENT SIDE-
1-622-612-17
BVV-5 ---- SS-31
BVV-5PS --- SS-31P



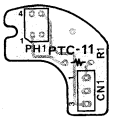
SS-31 -SOLDERING SIDE-
1-622-612-17
BVV-5 ---- SS-31
BVV-5PS --- SS-31P

15-28 (d)

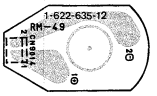
15-29 (d)

DD-5P; DRUM MOTOR DRIVER
PTC-11; SUPPLY/TAKE-UP REEL ROTATION DETECTOR
RM-49; REEL MOTOR DRIVER

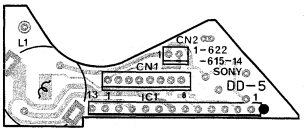
EK; S/N 10661 to 12777



PTC-11
-COMPONENT SIDE-
1-622-626-11
BVV-5
BVV-5PS



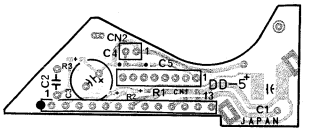
RM-49
-SOLDERING SIDE-
1-622-635-12
BVV-5
BVV-5PS



DD-5 -COMPONENT SIDE-
1-622-615-14, 15
BVV-5
BVV-5PS

NOTE;

BVV-5PS	DD-5P; S/N 10661 to 11126
	DD-5 ; S/N 11127 and higher



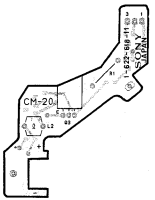
DD-5 -SOLDERING SIDE-
1-622-615-14, 15
BVV-5
BVV-5PS

NOTE;

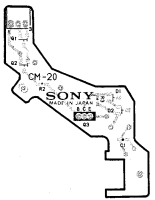
BVV-5PS	DD-5P; S/N 10661 to 11126
	DD-5 ; S/N 11127 and higher

SP-00550/ Druck 96

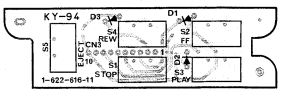
CM-20; EJECT MOTOR
DR-48; PINCH/BRAKE SOLENOIDS AND THREADING MOTOR DRIVER
KY-94; FUNCTION KEY/DISPLAY



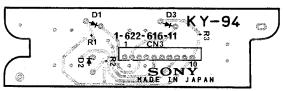
CM-20
-COMPONENT SIDE-
1-622-618-11
BVV-5
BVV-5PS



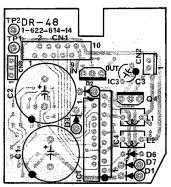
CM-20
-SOLDERING SIDE-
1-622-618-11
BVV-5
BVV-5PS



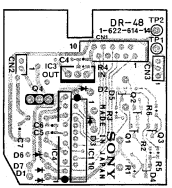
KY-94 -COMPONENT SIDE-
1-622-616-11
BVV-5
BVV-5PS



KY-94 -SOLDERING SIDE-
1-622-616-11
BVV-5
BVV-5PS



DR-48
-COMPONENT SIDE-
1-622-614-14
BVV-5
BVV-5PS



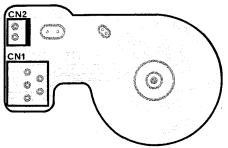
DR-48
-SOLDERING SIDE-
1-622-614-14
BVV-5
BVV-5PS

SP-00550/ Druck 98

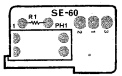
CT-73, SE-30, SE-60, SW-192, SW-200, SW-201

CT-73; METAL/OXIDE SELECTOR
SE-30; MECHANICAL FUNCTION CONTROL SENSOR
SE-60; TENSION REGULATOR RELEASE
SW-192; REC INHIBIT SWITCH FOR METAL
SW-200; CASSETTE-UP COMPARTMENT LOCK/UNTHREADING END SWITCH
SW-201; CASSETTE-IN SWITCH/REC INHIBIT SWITCH FOR OXIDE

S/N 10661 to 13987



SE-30 -COMPONENT SIDE-
1-622-629-11
8VV-5
8VV-5PS

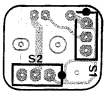


SE-60
-COMPONENT SIDE-
1-622-630-12, 13
8VV-5
8VV-5PS

CT-73
-COMPONENT SIDE-
1-622-621-12
8VV-5
8VV-5PS

SW-192
-COMPONENT SIDE-
1-622-622-12
8VV-5
8VV-5PS

SW-200
-COMPONENT SIDE-
1-622-620-12
8VV-5
8VV-5PS



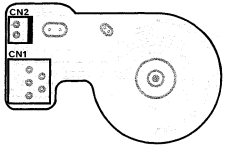
SW-201
-COMPONENT SIDE-
1-622-619-12
8VV-5
8VV-5PS

CT-73, SE-30, SE-60, SW-192, SW-200, SW-201

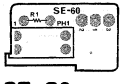
CT-73; METAL/OXIDE SELECTOR
SE-30; MECHANICAL FUNCTION CONTROL SENSOR
SE-60; TENSION REGULATOR RELEASE
SW-192; REC INHIBIT SWITCH FOR METAL
SW-200; CASSETTE-UP COMPARTMENT LOCK/UNTHREADING END SWITCH
SW-201; CASSETTE-IN SWITCH/REC INHIBIT SWITCH FOR OXIDE

S/N 10661 to 13987

S/N 13988 and higher



SE-30 -COMPONENT SIDE-
1-622-629-11
8VV-5
8VV-5PS



SE-60
-COMPONENT SIDE-
1-622-630-12, 13
8VV-5
8VV-5PS

CT-73
-COMPONENT SIDE-
1-622-621-12
8VV-5
8VV-5PS

CT-73
-COMPONENT SIDE-
1-622-621-14
8VV-5
8VV-5PS

SW-192
-COMPONENT SIDE-
1-622-622-12
8VV-5
8VV-5PS

SW-192
-COMPONENT SIDE-
1-622-622-14
8VV-5
8VV-5PS

SW-200
-COMPONENT SIDE-
1-622-620-12
8VV-5
8VV-5PS

SW-200
-COMPONENT SIDE-
1-622-620-14
8VV-5
8VV-5PS

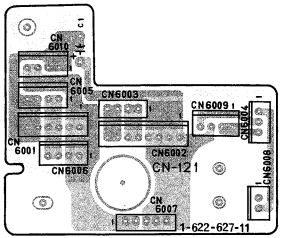
SW-201
-COMPONENT SIDE-
1-622-619-12
8VV-5
8VV-5PS

SW-201
-COMPONENT SIDE-
1-622-619-14
8VV-5
8VV-5PS

SP-00550/ Druck 100

CN-121, DC-27, DD-10, DUS-182, SW-131, SW-223

CN-121; DC INPUT RELAY
DC-27; EXTERNAL DC BACKUP
DD-10; PHANTOM DC-DC CONVERTER (FOR UC, EK)
DUS-182; RIPPLE FILTER
SW-131; BREAKER
SW-223; PHANTOM ON/OFF SWITCH (FOR UC, EK)

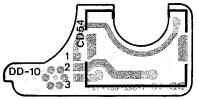


CN-121 -COMPONENT SIDE-
1-622-627-11
BVV-5
BVV-5PS

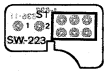
DUS-182
-COMPONENT SIDE-
1-623-135-12
BVV-5
BVV-5PS

DC-27
-COMPONENT SIDE-
1-622-634-11
BVV-5
BVV-5PS

SW-131 -COMPONENT SIDE-
1-622-632-11
BVV-5
BVV-5PS

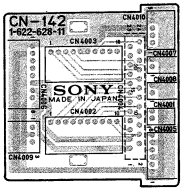


DD-10 -COMPONENT SIDE-
1-622-637-12
BVV-5
BVV-5PS

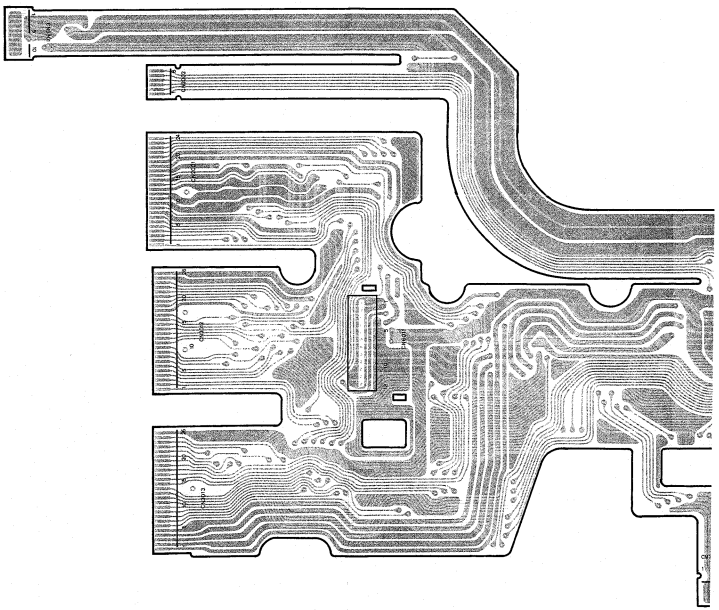


SW-223
-COMPONENT SIDE-
1-622-636-11
BVV-5
BVV-5PS

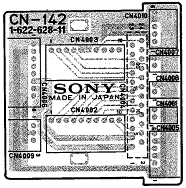
CN-142; 50PIN/FLEXIBLE BOARD
FL-38; FLEXIBLE HARNESS BOARD



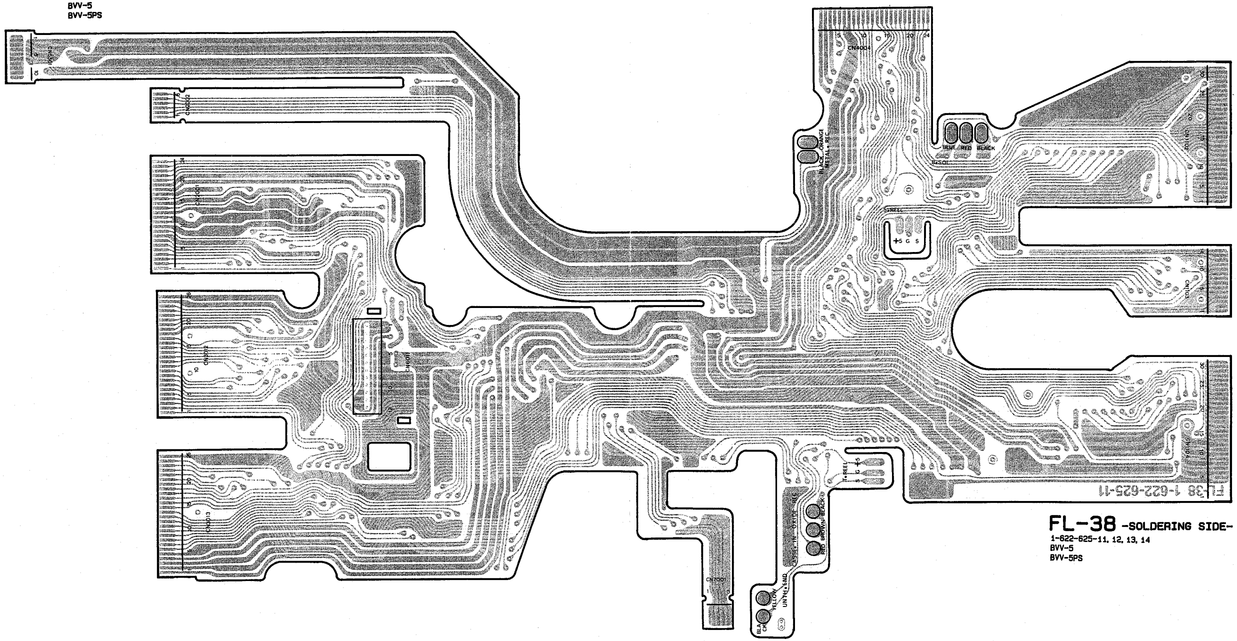
CN-142
-COMPONENT SIDE-
1-622-628-11
8VV-5
8VV-5PS



CN-142; 50PIN/FLEXIBLE BOARD
FL-38; FLEXIBLE HARNESS BOARD



CN-142
-COMPONENT SIDE-
1-622-628-11
BVV-5
BVV-5PS



FL-38 **-SOLDERING SIDE-**
1-622-625-11, 12, 13, 14
BVV-5
BVV-5PS

SECTION 16
SPARE PARTS AND FIXTURE

16-1. PARTS INFORMATION

(1) The shaded and ⚠ -marked components are critical to safety.
Replace only with the same components as specified.

(2) Replacement parts supplied from the Sony Parts Center will sometimes have a different shape and outside view from the parts which are used in the unit. This is due to "accommodating improved parts and/or engineering changes" or "standardization of genuine parts".
. This manual's exploded views and electrical spare parts lists indicate the part numbers of "the present standardized genuine parts".
. Regarding engineering part changes by our engineering department, refer to Sony service bulletins and service manual supplements.

(3) The parts marked with "s" in the SP column of the exploded views and electrical spare parts lists are normally stocked for replacement purposes. The parts marked with "o" in the SP column are not normally required for routine service work. Orders for parts marked with "o" will be processed, but allow for additional delivery time.

(4) Item with no part number and/or no description are not stocked because they are seldom required for routine service.

(5) (T) after a spring description is shown on the exploded views in order to indicate the number of a spring turn required for the use.
(Example)
Spring, tension (24T); This spring must be cut at its 24th turn for actual use.

PARTS CHANGE INFORMATION

. In this Parts list, **) marked parts are design-changed.
. Applicable Serial No. are as follows:

1) marked parts are for
Serial No. 10661 to 10880
2) marked parts are for
Serial No. 10881 and higher
3) marked parts are for
Serial No. 10661 to 11126
4) marked parts are for
Serial No. 11127 and higher
5) marked parts are for
Serial No. 10661 to 11386
6) marked parts are for
Serial No. 11387 and higher
7) marked parts are for
Serial No. 11127 to 11386
8) marked parts are for
Serial No. up to 11506
9) marked parts are for
Serial No. 11507 and higher
10) marked parts are for
Serial No. 10881 to 11506
11) marked parts are for
Serial No. up to 11889
12) marked parts are for
Serial No. 11890 and higher
13) marked parts are for
Serial No. 11720 and higher
14) marked parts are for
Serial No. 11507 to 11719
15) marked parts are for
Serial No. 11387 to 11889
16) marked parts are for
Serial No. 10881 to 11719
17) marked parts are for
Serial No. up to 11719
18) marked parts are for
Serial No. up to 12342
19) marked parts are for
Serial No. 12343 and higher

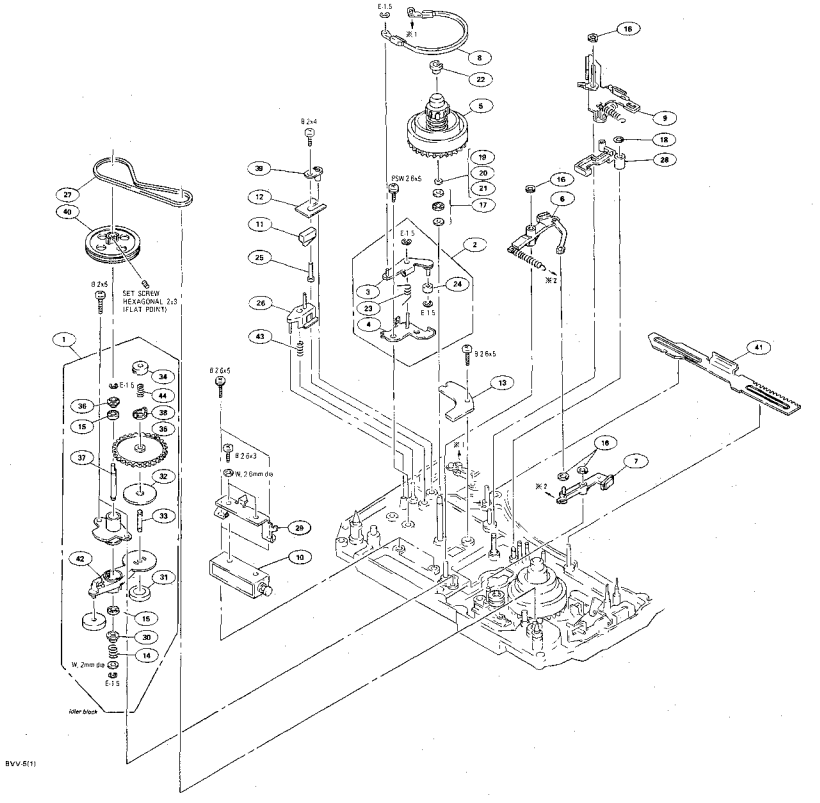
20) marked parts are for
Serial No. 11507 to 12777
21) marked parts are for
Serial No. 10681 to 12067
22) marked parts are for
Serial No. 12993 and higher
23) marked parts are for
Serial No. 12068 and higher
24) marked parts are for
Serial No. 10661 to 12992
25) marked parts are for
Serial No. 11507 to 11889
26) marked parts are for
Serial No. 11890 to 13222
27) marked parts are for
Serial No. 13223 and higher
28) marked parts are for
Serial No. up to 12777
29) marked parts are for
Serial No. 12778 and higher
30) marked parts are for
Serial No. 10661 to 13797
31) marked parts are for
Serial No. 13798 and higher
32) marked parts are for
Serial No. 10681 to 13797
33) marked parts are for
Serial No. 10661 to 13632
34) marked parts are for
Serial No. 13633 and higher
35) marked parts are for
Serial No. 10661 to 13987
36) marked parts are for
Serial No. 13988 and higher
37) marked parts are for
Serial No. 11890 to 13797
38) marked parts are for
Serial No. 11720 to 13797
39) marked parts are for
Serial No. 11507 to 13797
40) marked parts are for
Serial No. 15303 and higher
41) marked parts are for
Serial No. up to 18334
42) marked parts are for
Serial No. 18335 and higher
43) marked parts are for
Serial No. up to 18554
44) marked parts are for
Serial No. 18555 and higher
45) marked parts are for
Serial No. up to 18904
46) marked parts are for
Serial No. 18905 and higher
47) marked parts are for
Serial No. up to 19074
48) marked parts are for
Serial No. 19075 and higher
49) marked parts are for
Serial No. up to 19534
50) marked parts are for
Serial No. 19535 and higher

16-2. EXPLODED VIEW

. Exploded views are composed of the following blocks

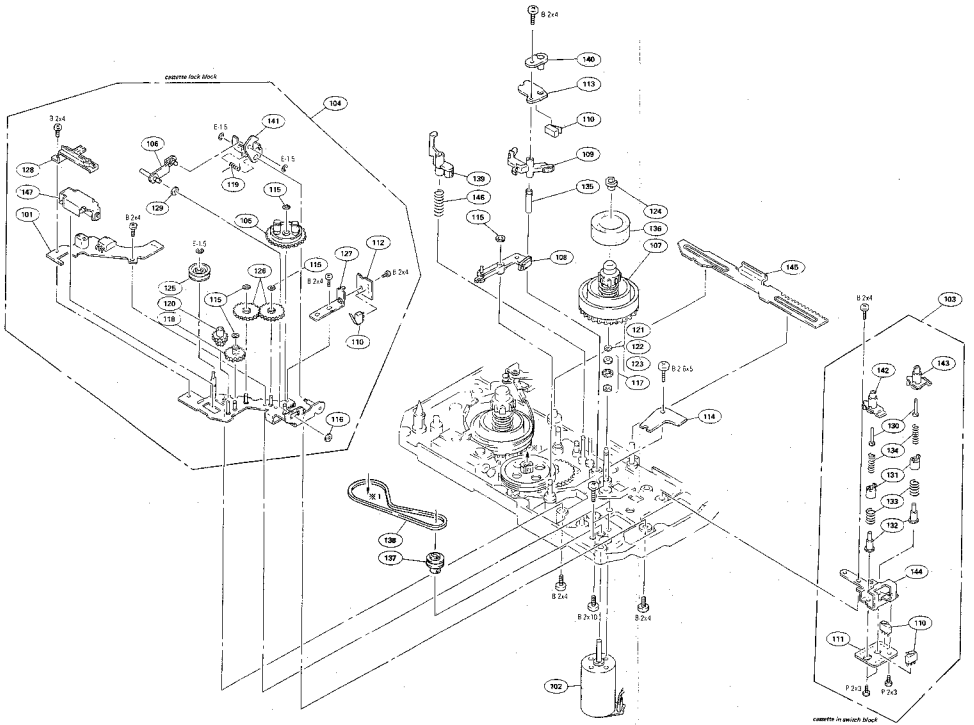
(1) Reel Drive Block (Supply Side)
(2) Reel Drive Block (Take-up Side)
(3) Reel Chassis (Back Side)
(4) Drum
(5) Threading Ring Drive
(6) Tension Regulator Block
(7) Gear Assembly Block
(8) Pinch Press Mechanism
(9) Cassette-up Compartment
(10) Ornamental Panel
(11) Side Panel (1)
(12) Side Panel (2)
(13) Side Panel (3)
(14) Battery Case
(15) VTR Bracket

Reel Drive Block (Supply side)



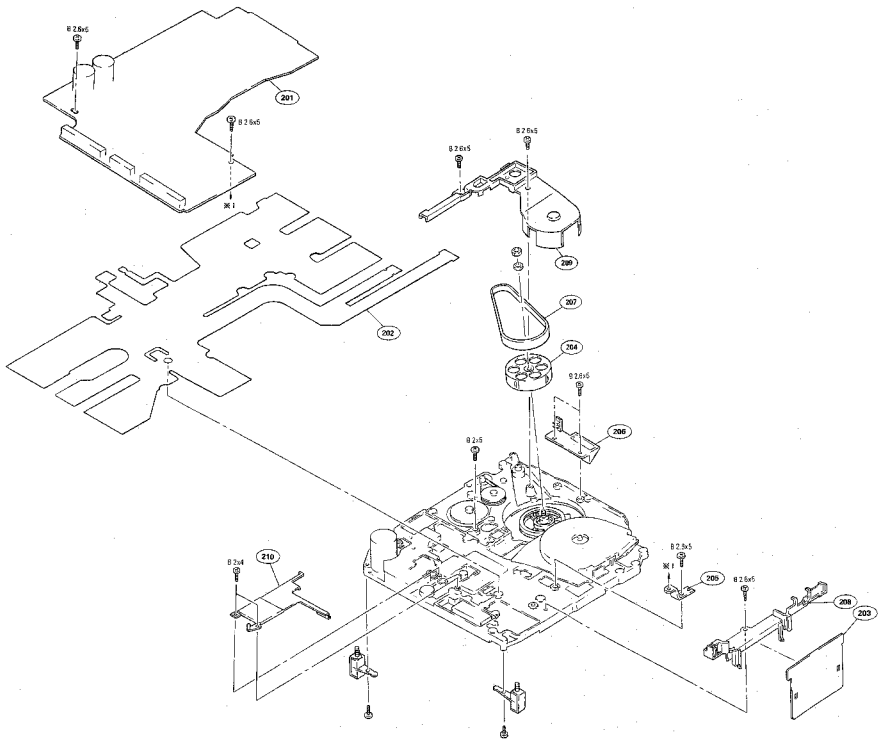
No.	Parts No.	SP	Description
1	A-6740-089-A	s	IDLER ASSY
2	A-6747-255-A	o	SHAFT ASSY, BAND
3	X-3717-719-1	o	ARM ASSY, BAND
4	X-3717-720-1	o	BASE ASSY, BAND SHAFT
5	X-3717-733-3	s	TABLE ASSY, REEL
6	X-3717-734-5	s	BRAKE ASSY, MAIN, S
7	X-3717-735-4	s	BRAKE ASSY, MAIN, T
8	X-3717-736-1	s	BAND ASSY, T
9	X-3717-740-1	s	BRAKE ASSY, S SOFT
10	1-454-382-21	s	SOLENOID, PLUNGER
11	1-571-064-11	s	SWITCH, MICRO
12	1-622-622-11	o	PRINTED CIRCUIT BOARD, SW-192
13	1-622-626-11	o	PRINTED CIRCUIT BOARD, PTC-11
14	3-637-331-00	s	SPRING, COMPRESSION (L)
15	3-669-443-00	s	BEARING, BALL (NO FLANGE)
16	3-669-465-00	s	WASHER (1.5), STOPPER
17	3-676-322-00	s	BEARING, THRUST
18	3-676-387-00	s	POLY-SLIDER (DIA.1.6)
19	3-701-439-01	s	WASHER, 3MM DIA., 0.13T
20	3-701-439-11	s	WASHER, 3MM DIA., 0.25T
21	3-701-439-21	s	WASHER, 3MM DIA., 0.5T
22	3-703-074-00	s	CAP 3, SHAFT
23	3-717-831-01	o	SPRING
24	3-717-832-01	s	ROLLER, ARM
25	3-717-868-01	o	SHAFT, MSW
26	3-717-906-01	s	ACTUATOR, M
27	3-717-908-01	s	BELT, REEL
28	3-717-912-01	s	ARM, PROHIBITION
29	3-717-952-01	o	BRACKET, SOLENOID
30	3-717-982-01	o	RETAINER (2), BEARING
31	3-717-983-01	o	STOPPER, IDLER
32	3-717-985-01	o	LINING, LIMITER
33	3-717-986-01	o	SHAFT, ARM, DRIVING
34	3-717-987-01	o	RETAINER (1), SPRING
35	3-717-988-01	o	GEAR, IDLER
36	3-717-990-01	o	RETAINER (1), BEARING
37	3-717-991-01	o	SHAFT, PULLEY
38	3-717-992-01	o	STOPPER
39	3-718-007-01	o	GUIDE, HARNESS
40	3-718-029-01	s	PULLEY, MIDWAY
41	3-718-031-01	s	SLIDER
42	3-718-039-01	o	ARM, DRIVING
43	4-838-582-00	s	SPRING, COMPRESSION
44	4-866-079-01	s	SPRING, COMPRESSION

Reel Drive Block (Take-up Side)



No.	Parts No.	SP	Description
101	A-6725-565-A	o	MOUNTED CIRCUIT BOARD, CM-20
102	A-6757-183-A	s	MOTOR ASSY, REEL
103	A-6748-193-A	s	SW ASSY, CASSETTE IN
104	A-6751-366-A	s	LOCK ASSY
105	X-3682-807-1	s	GEAR ASSY, LAST STEP
106	X-3717-722-1	o	UNLOCK ASSY
107	X-3717-733-3	s	TABLE ASSY, REEL
108	X-3717-735-3	s	BRAKE ASSY, MAIN, T
109	X-3717-741-1	s	BRAKE ASSY, T SOFT
110	1-571-064-11	s	SWITCH, MICRO
111	1-622-619-11	o	PRINTED CIRCUIT BOARD, SW-201
112	1-622-620-11	o	PRINTED CIRCUIT BOARD, SW-200
113	1-622-621-11	o	PRINTED CIRCUIT BOARD, CT-73
114	1-622-626-11	o	PRINTED CIRCUIT BOARD, FTC-11
115	3-570-615-00	s	POLY-WASHER (DIA.1.2)
116	3-669-465-00	s	WASHER (1.5), STOPPER
117	3-676-322-00	s	BEARING, THRUST
118	3-682-818-00	s	GEAR, MIDWAY
119	3-682-824-00	o	SPRING, TORSION
120	3-682-842-00	s	WHEEL, WORM
121	3-701-439-01	s	WASHER, 3MM DIA., 0.13T
122	3-701-439-11	s	WASHER, 3MM DIA., 0.25T
123	3-701-439-21	s	WASHER, 3MM DIA., 0.5T
124	3-703-074-00	s	CAP 3, SHAFT
125	X-3717-770-1	o	PULLEY,(2) ASSY
126	3-717-834-01	o	GEAR, RELAY
127	3-717-835-01	o	BRACKET (2)
128	3-717-836-01	o	RETAINER, MOTOR
129	3-717-837-01	o	ROLLER
130	3-717-844-01	s	SHAFT, DETECTION
131	3-717-845-01	o	SUPPORT, SHAFT, DETECTION
132	3-717-846-01	o	SHAFT, CENTER
133	3-717-847-01	o	SPRING, COMPRESSION
134	3-717-848-01	o	SPRING, COMPRESSION
135	3-717-871-01	o	SHAFT, T SOFT BRAKE
136	3-717-903-01	s	CUSHION, REEL TABLE
137	A-6759-365-A	s	PULLEY (1) ASSY
138	3-717-308-01	s	BELT, REEL
139	3-717-911-01	o	ACTUATOR
140	3-718-007-01	o	GUIDE, HARNESS
141	3-718-018-01	o	ARM, CASSETTE COMPARTMENT LOCK
142	3-718-020-01	o	PLATE (1), FUNCTION, SW
143	3-718-021-01	o	PLATE (2), FUNCTION, SW
144	3-718-022-01	o	BRACKET (1)
145	3-718-031-01	s	SLIDER
146	4-838-582-00	s	SPRING, COMPRESSION
147	8-835-067-01	s	MOTOR, DC (DNR-5300A)

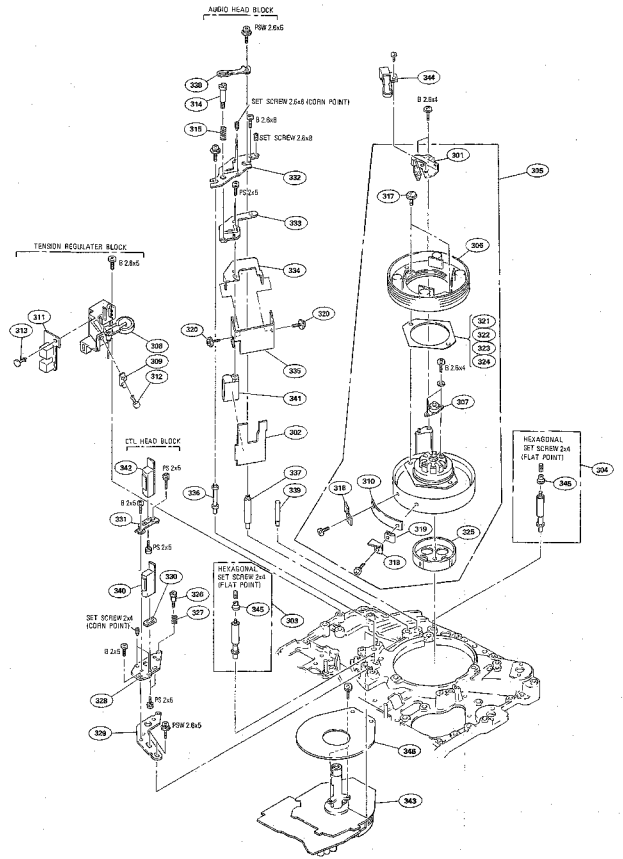
Reel Chassis (Back Side)



BVV-6(1)
BVV-6PS(1)

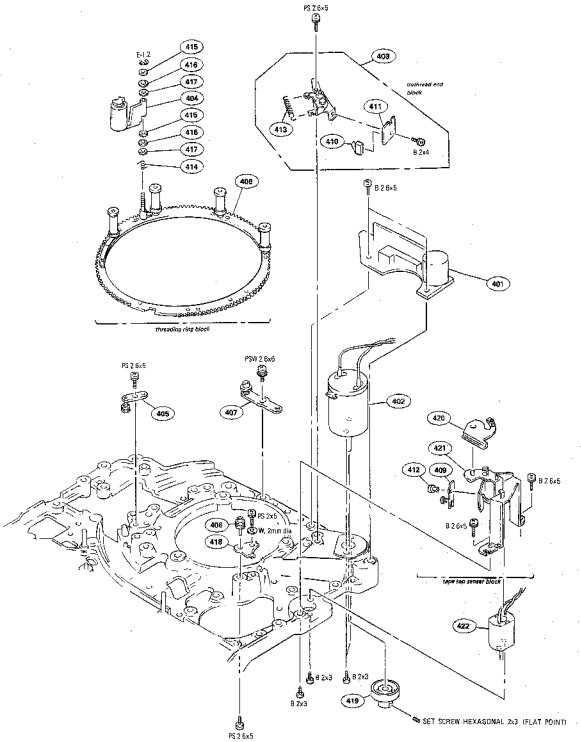
No.	Parts No.	SP	Description
201	A-6715-362-A	o	MOUNTED CIRCUIT BOARD, SS-31 (FOR UC, J)
	A-6715-377-A	o	MOUNTED CIRCUIT BOARD, SS-31P (FOR SK)
202	1-622-625-12	o	PRINTED CIRCUIT BOARD, FL-38
203	1-622-628-11	o	PRINTED CIRCUIT BOARD CN-142
204	X-3717-113-1	o	PULLEY ASSY, DRUM
205	3-717-872-01	o	BRACKET, SS
206	3-717-873-01	o	RETAINER SS PC BOARD
207	3-717-910-02	*	BELT, DRUM
208	3-718-025-01	o	HOLDER, CN-142
33)209	3-718-027-01	o	GUARD, DRUM PULLEY
34)209	3-718-027-04	o	GUARD, DRUM PULLEY
210	3-718-030-01	o	COVER, IDLER

Drum



No.	Parts No.	SP	Description
301	A-6050-655-A	s	BRUSH ASSY
302	A-6723-563-A	o	MOUNTED CIRCUIT BOARD, PA-53
303	A-6746-023-A	s	GUIDE ASSY, ENTRANCE
304	A-6746-024-A	s	GUIDE ASSY, EXIT
305	A-6050-501-A	s	HEAD DRUM ASSY, DBH-03A-R (FOR UC, J)
	A-6050-525-A	s	HEAD DRUM ASSY, DBH-04A-R (FOR EK)
306	A-6762-315-A	s	UPPER DRUM ASSY, DBR-03-R (FOR UC, J)
	A-6762-336-A	s	UPPER DRUM ASSY, DBR-04-R (FOR EK)
307	A-6050-657-A	s	SLIP RING ASSY
308	X-3717-713-1	o	SENSOR SUB ASSY
309	1-543-316-21	s	HEAD, SENSING (SMALL TYPE)
310	1-586-633-00	s	DETECTOR, DSV
311	1-622-630-11	o	PRINTED CIRCUIT BOARD, SE-60
312	2-279-715-01	s	RIVET, NYLON
313	3-531-576-01	s	RIVET
314	3-643-451-00	s	SCREW, AZIMUTH ADJUSTMENT
315	3-633-358-00	s	SPRING, COMPRESSION
316	3-675-702-00	o	WASHER, INSULATING
317	3-675-740-00	s	EXT. TOOTH (W) (MIDDLE)
318	3-675-756-02	o	STOPPER (A), TAPE
319	3-675-757-01	o	TERMINAL, GROUND
320	3-703-502-01	s	SCREW
321	3-717-120-01	s	SPACER, FLANGE
322	3-717-120-11	s	SPACER, FLANGE
323	3-717-120-21	s	SPACER, FLANGE
324	3-717-120-31	s	SPACER, FLANGE
325	X-3717-113-2	s	PULLEY ASSY, DRUM
326	3-717-792-01	s	STOPPER, HEAD
327	3-717-794-01	s	SPRING, COMPRESSION
328	3-717-795-01	o	BRACKET, CTL HEAD
329	3-717-796-01	o	DECK, CTL HEAD
330	3-717-797-01	o	SPACER, CTL HEAD
331	3-717-798-03	o	BRACKET, FE HEAD
332	3-717-827-01	o	BRACKET (A), A HEAD
333	3-717-828-01	o	BRACKET (B), A HEAD
334	3-717-829-01	o	CASE (F), SHIELD
335	3-717-830-01	o	CASE (R), SHIELD
336	3-717-874-01	o	SUPPORT (A), AU HEAD
337	3-717-875-01	o	SUPPORT (B), AU HEAD
338	3-717-920-01	o	ADJUSTOR, T
339	3-717-923-01	s	GUIDE, DUMMY
340	8-825-554-83	s	HEAD, CTL (PS244-21E)
341	8-825-749-01	s	HEAD, AU FPS244-2103
342	8-825-770-72	s	HEAD, FE EF291-21
343	8-835-260-01	s	MOTOR, DC BHF-1919A (FOR UC, J)
	8-835-261-01	s	MOTOR, DC BHF-1920A (FOR EK)
344	3-718-184-01	o	COVER, BRUSH
345	3-676-137-02	s	FLANGE, TAPE ROLLER
346	3-717-916-02	s	SHIELD, CAPSTAN

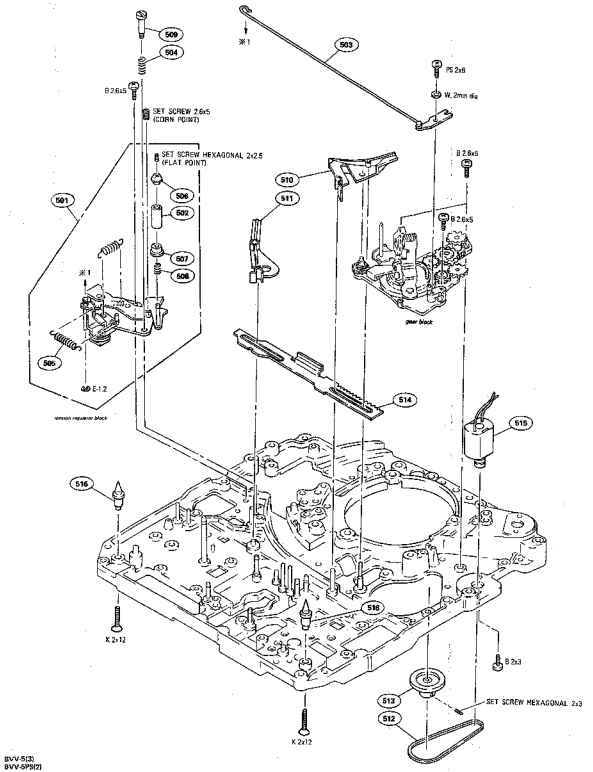
Threading Ring Drive



8VV-9(2)
8VV-9PS(1)

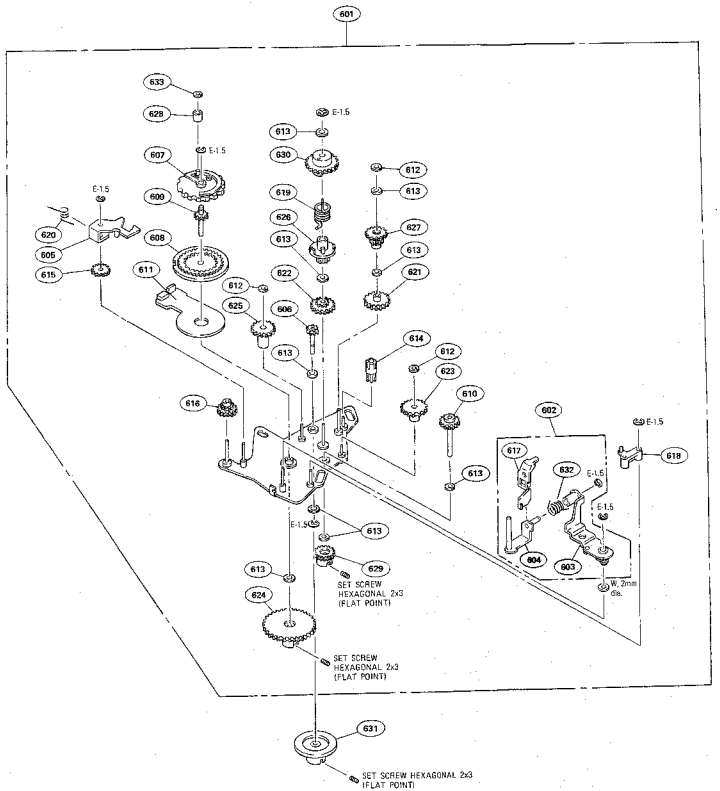
No.	Parts No.	SP	Description
3)401	A-6725-577-B	o	MOUNTED CIRCUIT BOARD, DD-5P (FOR EK)
4)401	A-6725-566-B	o	MOUNTED CIRCUIT BOARD, DD-5 (FOR UC, J, EK)
402	A-6737-181-A	s	MOTOR ASSY, DRUM
403	A-6747-256-A	s	UNTHREADED ASSY
404	X-3676-031-4	s	PINCH ARM ASSY
405	X-3717-727-1	s	ROLLER (A) ASSY, RING
406	X-3717-728-1	s	ROLLER (B) ASSY, RING
407	X-3717-729-1	s	PLATE ASSY, ADJUSTMENT
408	X-3717-743-1	s	RING SUB ASSY, THREADING
409	1-543-316-21	s	HEAD, SENSING (SMALL TYPE)
410	1-571-064-11	s	SWITCH, MICRO
411	1-622-620-11	o	PRINTED CIRCUIT BOARD, SW-200
412	2-279-715-01	s	RIVET, NYLON
413	3-305-902-00	s	SPRING, TENSION
414	3-676-304-00	s	SPRING
415	3-701-436-01	s	WASHER, 1.6MM DIA., 0.13T
416	3-701-436-11	s	WASHER, 1.6MM DIA., 0.13T
417	3-701-436-21	s	WASHER, POLYETHYLENE
418	3-717-880-01	o	STOPPER (B), RING
419	3-717-919-01	o	PULLEY, MOTOR, D
420	3-718-024-01	s	PLATE, CORRECTION, SLANT GUIDE
421	3-718-064-01	o	BASE, TAPE TOP SENSOR
422	8-835-159-01	s	MOTOR, DC SF-0873

Tension Regulator Block



No.	Parts No.	SP	Description
501	A-6742-062-A	s	TENSION REGULATOR ASSY
502	X-3675-851-0	s	ROLLER ASSY, TR
503	X-3717-737-1	s	ROD ASSY, PULL
504	3-684-290-01	s	SPRING, COMPRESSION
505	3-674-402-00	s	SPRING, TENSION
506	3-677-752-00	s	NUT, ADJUSTMENT, T
507	3-717-859-01	s	FLANGE, TR (LOWER)
508	2-618-901-00	s	STRING, PRESSURE
509	3-717-905-01	s	SCREW, TENSION REGULATOR BASE
510	3-717-909-01	o	GUIDE, PINCH ROLLER
511	3-717-918-01	s	STOPPER, TENSION REGULATOR
512	3-717-921-01	s	BELT, L MOTOR
513	3-717-922-01	s	PULLEY DECELERATION
514	3-718-031-01	s	SLIDER
515	8-835-159-01	s	MOTOR, DC SP-0873
12)516	3-729-717-01	s	SHAFT CASSETE GUIDE

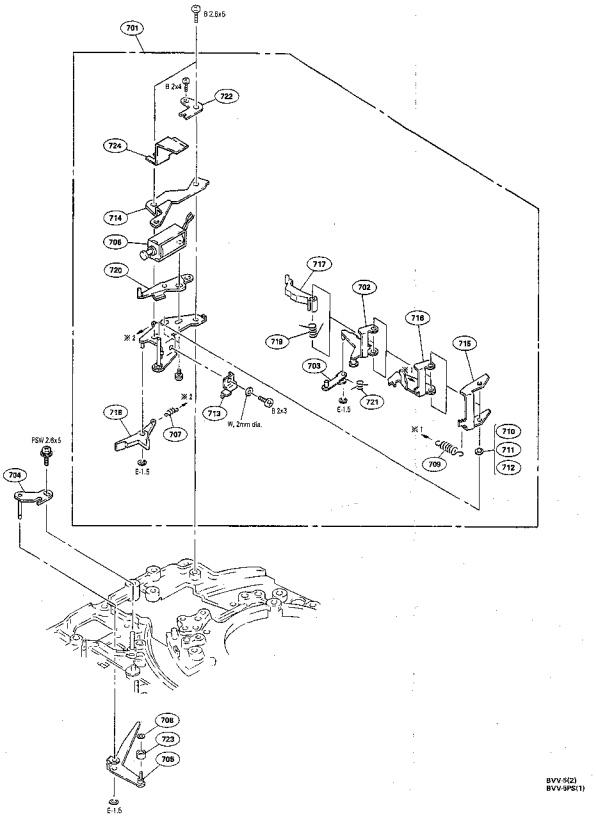
Gear Ass'y Block



BVV-5 (2)
BVV-5PS (2)

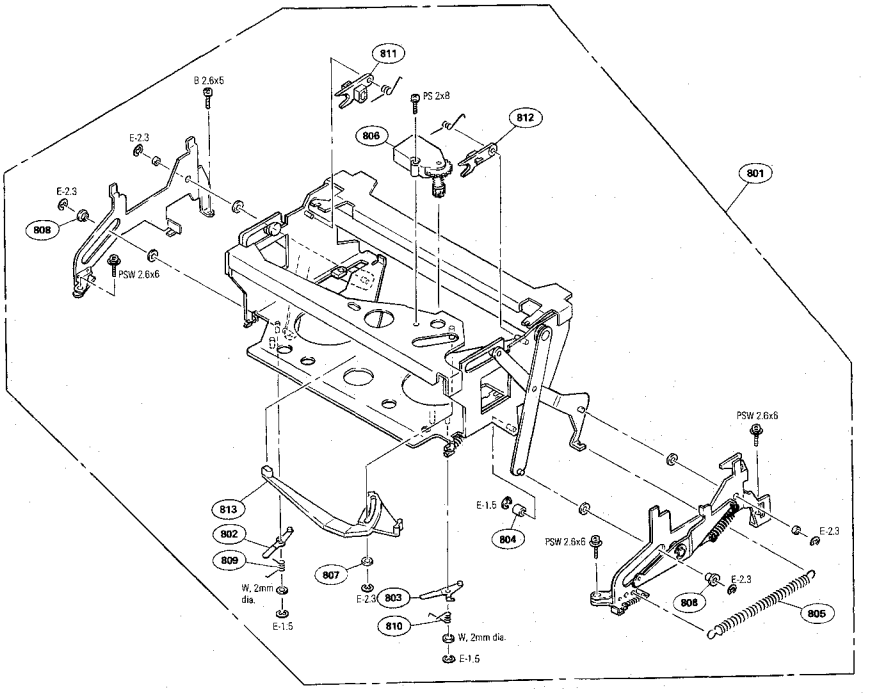
No.	Parts No.	SP	Description
3)601	A-6750-217-C	s	GEAR ASSY
4)601	A-6765-217-E	s	GEAR ASSY
602	A-6746-056-A	s	GUIDE ASSY, T DRAWER
603	X-3717-702-2	o	ARM ASSY, T DRAWER
604	X-3717-703-2	s	LINK ASSY, SLANT
605	X-3717-704-3	o	CHANGER ASSY, D
606	X-3717-705-1	o	GEAR ASSY, MOTHER
607	X-3717-706-2	o	GEAR (UPPER) ASSY, ROTOR
608	X-3717-707-1	s	ROTOR ASSY
609	X-3717-708-1	o	SHAFT ASSY, ROTOR
610	X-3717-709-1	o	SHAFT ASSY, T GEAR
611	1-622-629-11	o	PRINTED CIRCUIT BOARD, SE-30
612	3-676-387-00	s	POLY-SLIDER (DIA.1.6)
613	3-701-437-11	s	WASHER, 2MM DIA., 0.25T
614	3-717-721-01	s	GEAR, MANUAL
615	3-717-722-01	o	GEAR (1), SD
616	3-717-723-01	o	GEAR (2), SD
617	3-717-725-02	o	TRAVELLER, TAPE
3)618	3-717-728-01	s	ARM, TD
4)618	3-717-728-02	s	ARM, TD
40)618	3-717-728-03	s	ARM,TD
619	3-717-729-01	o	SPRING
620	3-717-730-03	o	SPRING
621	3-717-731-01	o	GEAR, SECOND
622	3-717-732-01	o	GEAR, THIRD
623	3-717-733-01	o	GEAR, FOURTH
624	3-717-734-01	o	GEAR (LOWER), ROTOR
625	3-717-735-01	o	GEAR, TRANSFER
626	3-717-736-01	o	LIMITER (LOWER)
627	3-717-737-02	o	GEAR, DRIVE, R
628	3-717-738-02	o	ROLLER, CHANGE, D
629	3-717-739-01	o	GEAR, ROTOR DRIVE
630	3-717-740-01	o	LIMITER (UPPER)
631	3-717-922-01	s	PULLEY, DECELERATION
632	3-718-181-01	s	SPRING, SLANT LINK
633	3-559-408-00	s	POLY-WASHER (DIA.1.2)

Pinch Press Mechanism



No.	Parte No.	SP	Description
8)701	A-6747-257-A	#	PRESS ASSY, PINCH
9)701	A-6747-257-B	#	PRESS ASSY, PINCH
702	X-3717-711-1	o	LEVER (B) ASSY, PINCH PRESS
703	X-3717-712-1	o	ARM ASSY, JOINT
704	X-3717-725-1	o	BASE ASSY, PINCH LEVER
705	X-3717-726-1	o	LEVER (D) ASSY, PINCH PRESS
706	1-454-445-11	s	SOLENOID, PLUNGER
707	3-547-664-00	s	SPRING, TENSION
708	3-676-387-00	s	POLY-SLIDER (DIA.1.6)
709	3-678-774-00	s	SPRING, TENSION
710	3-701-437-01	s	WASHER, 2MM DIA., 0.13T
711	3-701-437-11	s	WASHER, 2MM DIA., 0.25T
712	3-701-437-21	s	WASHER, 2MM DIA., 0.5T
713	3-717-772-01	o	STOPPER
714	3-717-773-01	o	BASE (UPPER), PINCH
715	3-717-774-01	o	LEVER (A), PINCH PRESS
716	3-717-775-01	o	LEVER (C), PINCH PRESS
717	3-717-776-01	o	LEVER (A), RELEASE
718	3-717-777-01	o	LEVER (B), RELEASE
719	3-717-778-01	o	SPRING
8)720	3-717-779-01	o	SPACER, SOLENOID
9)720	3-717-779-02	o	SPACER, SOLENOID
721	3-717-780-01	o	SPRING
722	3-717-781-01	o	PLATE, ADJUSTMENT
723	3-717-869-01	s	ROLLER, PINCH
724	3-718-170-01	o	RETAINER, PINCH

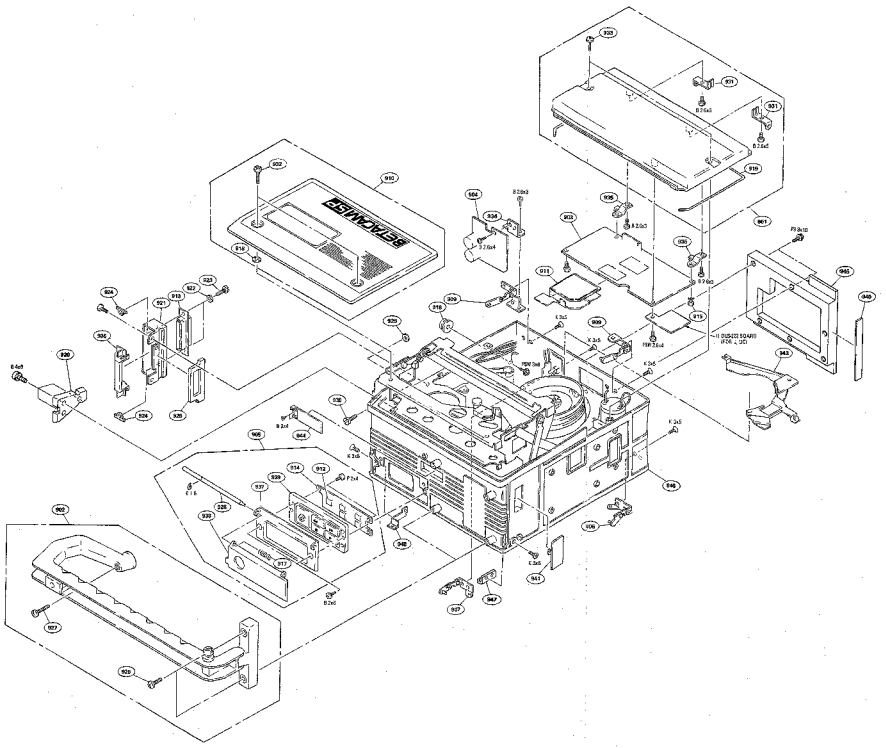
Cassette-up Compartment



No.	Parts No.	SP	Description
801	A-6751-365-H	s	CASSETTE COMPARTMENT ASSY
802	X-3166-197-1	o	STOPPER (LEFT) ASSY
803	X-3166-198-1	o	STOPPER (RIGHT) ASSY
804	3-676-221-00	s	ROLLER, LOCK
805	3-681-527-00	s	SPRING, TENSION
806	3-681-528-00	s	DAMPER
807	3-701-439-21	s	WASHER 3MMDIA., 0.5T
808	3-172-265-01	s	ROLLER, ARM
13 809	3-717-803-02	o	SPRING (LEFT)
810	3-717-804-01	o	SPRING (RIGHT)
811	3-717-805-01	o	RETAINER (LEFT), CASSETTE
812	3-718-049-01	o	RETAINER (RIGHT), CASSETTE
813	3-718-050-04	s	GEAR

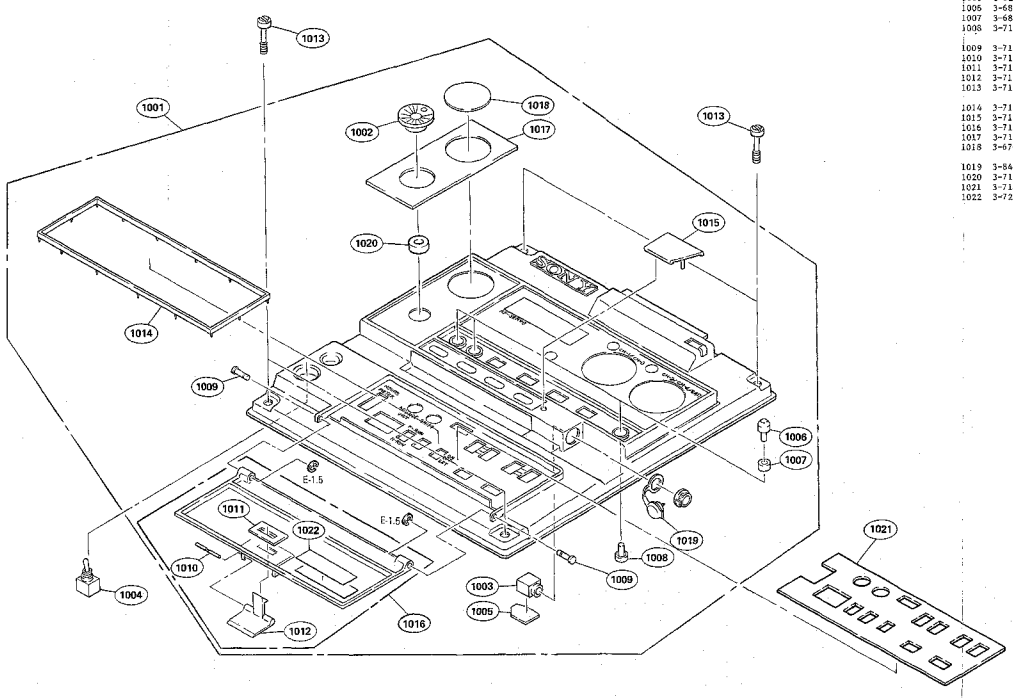
BVV-5(2)
BVV-5PS(1)

Ornamental Panel



No.	Parts No.	SP	Description
3)901	A-6703-652-C	s	LID ASSY, VR
4)901	A-6703-652-D	s	LID ASSY, VR
3)902	A-6703-653-A	o	HANDLE ASSY
4)902	A-6703-653-D	o	HANDLE ASSY
903	A-6713-276-A	o	MOUNTED CIRCUIT BOARD, AU-72 (FOR UC, J)
	A-6713-324-A	o	MOUNTED CIUCUIT BOARD, AU-72P (FOR EK)
904	A-6717-446-B	o	MOUNTED CIRCUIT BOARD, DR-AS
905	A-6737-182-A	s	KEY BOARD ASSY
906	X-3717-730-1	o	STOPPER (A) ASSY, SIDE PLATE
907	X-3717-731-1	o	STOPPER (B) ASSY, SIDE PLATE
908	X-3717-738-1	o	BASE (A) (RIGHT) ASSY, HINGE
909	X-3717-739-1	o	BASE (B) (RIGHT) ASSY, HINGE
910	X-3717-757-1	s	LID ASSY, UPPER
1)911	X-3717-773-1	o	SHIELD (1) ASSY, AU
2)911	X-3717-773-3	o	SHIELD (1) ASSY, AU
912	1-554-371-00	s	SWITCH, TACT
913	1-562-083-00	s	HOUSING, CONNECTOR, 50P
914	1-622-616-11	o	PRINTED CIRCUIT BOARD, KY-94
915	3-531-576-11	s	RIVET
916	3-669-595-00	s	WASHER (2), STOPPER
917	3-673-281-00	o	SPRING, COMPRESSION
918	3-676-125-00	o	PIN, STOPPER
3)919	3-676-339-11	s	RUBBER
4)919	3-729-701-11	s	RUBBER (CARBON), CONDUCTIVE
920	3-676-349-02	o	SHOE, V
1)921	3-676-365-04	o	HOLDER, V CONNECTOR
2)921	3-676-365-05	o	HOLDER, V CONNECTOR
922	3-676-369-00	o	NUT, SPACER
923	3-676-370-00	s	PIN, HOLDER, CH
924	3-676-371-00	o	NUT (S), PLATE
925	3-687-116-01	o	WASHER (4), STOPPER
926	3-717-852-01	s	SCREW (A), HANDLE
927	3-717-853-01	s	SCREW (B), HANDLE
928	3-717-854-01	o	SHAFT, KEY BOARD COVER
929	3-717-904-01	o	SHIELD, V CONNECTOR
930	3-717-914-01	s	SCREW, DOCKING
931	3-717-945-01	o	HINGE (E) (RIGHT)
932	3-717-978-01	s	SCREW, LID, UPPER
933	3-717-993-03	s	SCREW, LID
934	3-717-994-01	o	BRACKET, DR
935	3-717-995-01	o	RETAINER, AU
936	3-718-026-01	o	CAP, C HOLDER
937	3-718-042-01	o	FRAME, KEY BOARD
938	3-718-043-01	o	COVER, KEY BOARD
939	3-718-044-01	s	COVER, KEY BOARD RUBBER
940	3-718-143-01	o	LABEL, AUDIO
941	3-718-161-01	s	COVER, BACK
943	3-718-166-01	o	TAPE GUARD Z
944	3-718-179-01	s	TOP COVER II
945	X-3717-790-1	o	COVER ASSY, CH
946	A-6703-648-C	s	FRAME ASSY, MAIN
947	3-717-925-01	s	STOPPER (C) SIDE PLATE
948	3-717-926-02	s	STOPPER (D) SIDE PLATE

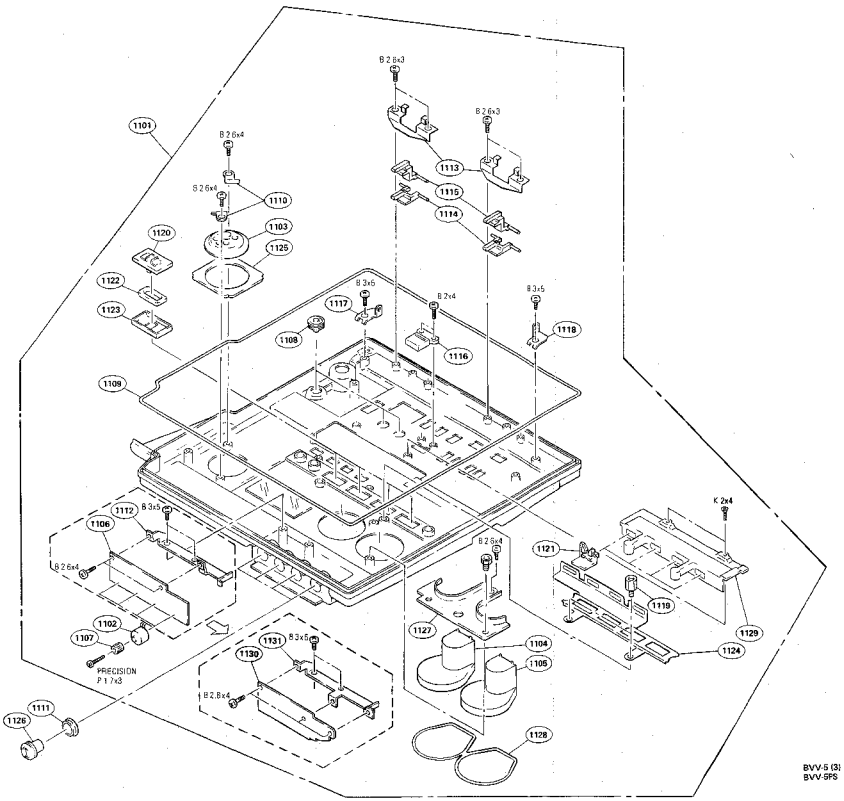
Side Panel (1)



BVV-5 (4)
BVV-5PS (2)

No.	Parts No.	SP	Description
1001	A-6703-649-J	s	PANEL ASSY, SIDE
1002	3-718-129-01	s	KNOB (B), VR
1003	1-507-980-11	s	JACK
1004	1-553-448-00	s	SWITCH, TOGGLE
1005	1-622-631-11	o	PRINTED CIRCUIT BOARD, HP-34
1006	3-686-084-01	s	PUSH BUTTON
1007	3-686-086-01	s	CUSHION, BUTTON
1008	3-717-931-01	s	PIN, PUSH BUTTON
1009	3-717-938-01	o	SHAFT, TC LID
1010	3-717-940-01	s	SHAFT, TC LEVER
1011	3-717-941-01	s	RUBBER, TC LEVER
1012	3-717-942-01	s	LEVER, TC
1013	3-717-993-03	s	SCREW, LID
1014	3-718-033-01	s	RUBBER, TC DROP PROTECTION
1015	3-718-034-01	s	COVER, JACK
1016	3-718-059-01	o	LID, TC
1017	3-718-107-01	s	PAD (A), EAR
1018	3-676-080-00	s	PAD (B), EAR
1019	3-849-405-00	s	COVER, EARPHONE JACK
1020	3-718-131-01	o	RING, DROP PROTECTION
1021	3-718-144-02	s	LABEL, TC
1022	3-729-724-01	s	WINDOW

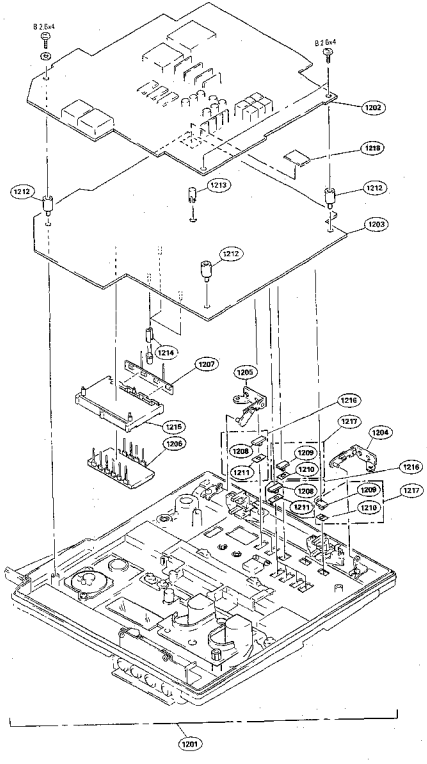
Side Panel (2)



BVV-5 (3)
BVV-5PS

No.	Parts No.	SP	Description
7)1101	A-6703-649-J	s	PANEL ASSY, SIDE
1102	1-226-416-00	s	RES, VAR, CARBON 10K
1103	1-503-293-00	s	SPEAKER
1104	1-520-495-11	s	METER, LEVEL
1105	1-520-495-21	s	METER, LEVEL
3)1106	1-622-633-11	o	PC BOARD, CT-85
1107	3-676-088-00	o	SHAFT, KNOB
1108	3-676-246-00	s	COVER, SWITCH
3)1109	3-676-339-11	s	RUBBER
4)1109	3-729-701-01	s	RUBBER (CARBON), CONDUCTIVE
1110	3-717-937-01	o	STOPPER, SPEAKER
1111	3-717-913-03	s	RUBBER, VR
5)1112	3-717-932-01	o	BRACKET, VR
1113	3-717-933-01	o	BASE, PC BOARD HINGE
1114	3-717-934-01	s	HINGE (A), PC BOARD
1115	3-717-935-01	s	HINGE (B), PC BOARD
1116	3-717-939-01	o	STOPPER, TC LID
1117	3-717-943-01	o	HINGE (A), SIDE PLATE
1118	3-717-944-01	o	HINGE (B), SIDE PLATE
1119	3-718-070-01	o	SUPPORT, KNOB RETAINER
1120	3-718-072-01	s	KNOB (A), SW
1121	3-718-073-01	s	KNOB (B), SW
1122	3-718-074-01	s	RING, DROP PROTECTION
1123	3-718-075-01	o	PLATE, ORNAMENTAL
1124	3-718-076-01	o	RETAINER, KNOB
1125	3-718-098-02	o	CUSHION, SPEAKER
1126	3-718-099-01	s	KNOB (A), VR
1127	3-718-130-01	o	BRACKET, METER
1128	3-718-132-01	o	SHEET, METER DROP PROTECTION
1129	3-718-149-02	o	LID, LC
4)1130	1-622-633-13	o	PC BOARD, CT-85
15)1131	3-717-932-02	o	BRACKET, VR
12)1131	3-717-932-03	o	BRACKET, VR

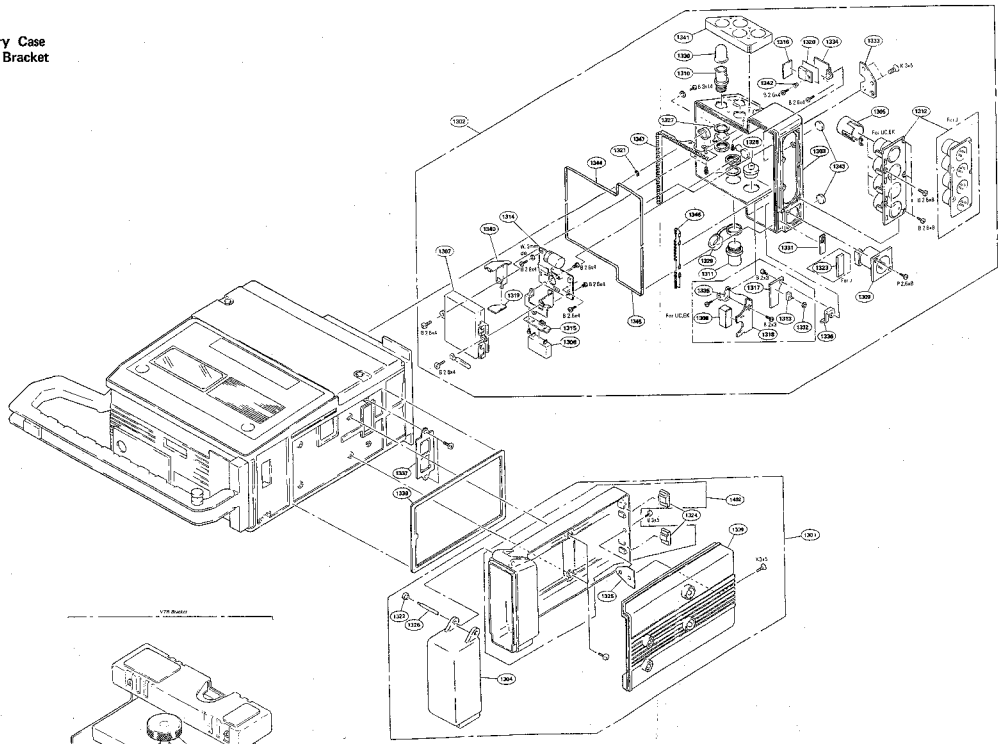
Side Panel (3)

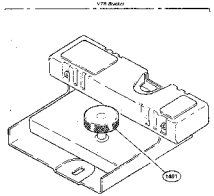


BVV-5 (4)
BVV-5PS (3)

No.	Parts No.	SP	Description
1201	A-6703-649-J	s	SIDE PANEL ASSY
1202	A-6711-816-A	o	MOUNTED CIRCUIT BOARD, VA-52 (FOR UC, J)
	A-6711-851-A	o	MOUNTED CIRCUIT BOARD, VA-52P (FOR EK)
1203	A-6713-275-A	o	MOUNTED CIRCUIT BOARD, TC-39 (FOR UC, J)
	A-6713-298-A	o	MOUNTED CIRCUIT BOARD, TC-39P (FOR EK)
1204	X-3717-730-1	o	STOPPER (A) ASSY, SIDE PLATE
1205	X-3717-731-1	o	STOPPER (B) ASSY, SIDE PLATE
1206	1-807-981-11	s	DISPLAY PANEL, LIQUID CRYSTAL
1207	1-808-016-11	s	LED MODULE
1)1208	3-717-900-01	s	KNOB (A) (TC), SW
1)1209	3-717-901-01	s	KNOB (C) (TC), SW
1)1210	3-717-902-01	o	PLATE, ORNAMENTAL
1)1211	3-717-902-11	o	PLATE, ORNAMENTAL
8)1212	3-717-915-01	o	SUPPORT, VA
9)1212	3-717-915-03	o	SUPPORT, VA
1213	3-718-001-01	o	FOOT, SS
1214	3-718-004-01	o	HOLDER, LED
1215	3-719-182-01	o	HOLDER, LCD
2)1216	X-3717-784-1	s	KNOB (A) (TC), SW
2)1217	X-3717-785-1	s	KNOB (C) (TC), SW
44)1218	9-911-841-XX	s	CUSHION

Battery Case
VTR Bracket





BVV-5 (6)
BVV-5PS (3)

No.	Parts No.	SP	Description
1301	A-6703-651-C	s	CASE ASSY, BATTERY
3)1302	A-6732-291-C	s	BOX ASSY, CONNECTOR
4)1302	A-6732-291-F	s	BOX ASSY, CONNECTOR
1303	3-718-068-01	o	BOX, CONNECTOR
1304	X-3717-701-3	o	COVER ASSY, TOP, BATTERY
1305	X-3717-718-1	o	CASE ASSY, SHIELD
1306	1-464-758-11	s	CONVERTER, DC-DC (CD-54)
1307	1-464-822-11	s	CONVERTER, DC-DC (CD-55)
⚠ 1308	1-532-525-00	s	BREAKER, CIRCUIT
1309	1-560-999-11	s	CONNECTOR (WITH SW)
1310	1-561-781-11	s	CONNECTOR, BNC (RECEPTACLE)
1311	1-563-971-11	s	CONNECTOR, 20P
1312	1-566-616-11	s	CONNECTOR XLR, 3P(4 GANG)
1313	1-570-608-11	s	SWITCH, TOGGLE
1314	1-622-627-11	o	PRINTED CIRCUIT BOARD, CN-121
1315	1-622-632-11	o	PRINTED CIRCUIT BOARD, SW-131
1316	1-622-634-11	o	PRINTED CIRCUIT BOARD, DC-27
1317	1-622-636-11	o	PRINTED CIRCUIT BOARD, SW-223
1318	1-622-637-11	o	PRINTED CIRCUIT BOARD, DB-10
1319	1-623-135-11	o	PRINTED CIRCUIT BOARD, DUB-182
1320	3-660-978-00	o	SHEET, HEAT RESISTING
1321	3-669-596-00	s	WASHER (2.3), STOPPER
1322	3-703-075-00	s	CAP 2, SHAFT
1323	3-717-701-01	s	LABEL, CN (FOR J)
1324	3-717-707-02	o	CUSHION (2)
1325	3-717-708-01	o	RETAINER, CASE
1326	3-717-709-01	o	SHAFT, LID
1327	3-717-819-01	o	WASHER, BNC
1328	3-717-821-01	s	CAP, BREAKER
1329	3-717-822-01	s	CAP, DROP PROTECTION
1330	3-717-823-01	s	COVER, BNC
1331	3-717-824-01	o	LABEL, CN (FOR UC, EK)
1332	3-717-825-01	o	RING, O
1333	3-717-826-01	o	STOPPER
1334	3-718-005-01	o	BRACKET, D
1335	3-718-006-01	o	HOLDER
1336	3-718-009-01	o	STOPPER, SW
1337	3-718-028-01	o	HOLDER, TERMINAL
1338	3-718-032-01	s	SHEET, RUBBER, DROP PROTECTION
1339	3-718-040-02	o	COVER (I), BATTERY CASE
1340	3-718-065-01	o	HOLDER, PC BOARD
1341	3-718-066-01	o	GUARD, BNC
1342	4-026-252-00	s	WASHER, INSULATING
1343	4-872-529-00	o	FOOT, RUBBER
1344	3-729-702-01	s	RUBBER A, CONDUCTIVE
1345	3-729-703-01	s	RUBBER B, CONDUCTIVE
1346	3-729-704-01	s	SHIELD 2, CONNECTOR BOX
1347	3-729-705-01	s	SHIELD 1, CONNECTOR BOX
1401	X-3717-765-1	o	KNOB ASSY, ADJUSTMENT
1402	X-3717-742-5	o	CASE SUB ASSY, BATTERY

16-3. ELECTRICAL PARTS LIST

ABBREVIATIONS

All capacitors are in micro farads unless otherwise specified.

All inductors are in micro henries unless otherwise specified.

All resistors are in ohms.

General Purpose Electrical Parts List

Parts that are not listed in the "reference numbers order list" are shown in following list.
Reference numbers are omitted.

Part No.	SP	Description
CAPACITOR, CHIP CERAMIC		
1-163-083-00	s	CAP, CHIP CERAMIC 1pF ±0.25pF 50V
1-163-085-00	s	CAP, CHIP CERAMIC 2pF ±0.25pF 50V
1-163-087-00	s	CAP, CHIP CERAMIC 4pF ±0.25pF 50V
1-163-089-00	s	CAP, CHIP CERAMIC 6pF ±0.5pF 50V
1-163-091-00	s	CAP, CHIP CERAMIC 8pF ±0.5pF 50V
1-163-093-00	s	CAP, CHIP CERAMIC 10pF 5% 50V
1-163-097-00	s	CAP, CHIP CERAMIC 15pF 5% 50V
1-163-101-00	s	CAP, CHIP CERAMIC 22pF 5% 50V
1-163-105-00	s	CAP, CHIP CERAMIC 33pF 5% 50V
1-163-109-00	s	CAP, CHIP CERAMIC 47pF 5% 50V
1-163-113-00	s	CAP, CHIP CERAMIC 68pF 5% 50V
1-163-117-00	s	CAP, CHIP CERAMIC 100pF 5% 50V
1-163-121-00	s	CAP, CHIP CERAMIC 150pF 5% 50V
1-163-125-00	s	CAP, CHIP CERAMIC 220pF 5% 50V
1-163-129-00	s	CAP, CHIP CERAMIC 330pF 5% 50V
1-163-133-00	s	CAP, CHIP CERAMIC 470pF 5% 50V
1-163-137-00	s	CAP, CHIP CERAMIC 680pF 5% 50V
1-163-141-00	s	CAP, CHIP CERAMIC 1000pF 5% 50V
1-163-145-00	s	CAP, CHIP CERAMIC 1500pF 10% 50V
1-163-013-00	s	CAP, CHIP CERAMIC 2200pF 10% 50V
1-163-015-00	s	CAP, CHIP CERAMIC 3300pF 10% 50V
1-163-017-00	s	CAP, CHIP CERAMIC 4700pF 10% 50V
1-163-019-00	s	CAP, CHIP CERAMIC 6800pF 10% 50V
1-163-021-00	s	CAP, CHIP CERAMIC 0.01 10% 50V
1-163-023-00	s	CAP, CHIP CERAMIC 0.015 10% 50V
1-163-034-00	s	CAP, CHIP CERAMIC 0.033 50V
1-163-035-00	s	CAP, CHIP CERAMIC 0.047 50V
1-163-036-00	s	CAP, CHIP CERAMIC 0.068 50V
1-163-038-00	s	CAP, CHIP CERAMIC 0.1 50V
CAPACITOR, ELECTROLYTIC		
1-124-463-11	s	CAP, ELECT 0.1 20% 50V
1-124-464-11	s	CAP, ELECT 0.22 20% 50V
1-124-252-11	s	CAP, ELECT 0.33 20% 50V
1-124-465-21	s	CAP, ELECT 0.47 20% 50V
1-124-438-11	s	CAP, ELECT 1.0 20% 50V
1-124-257-11	s	CAP, ELECT 2.2 20% 50V
1-124-258-11	s	CAP, ELECT 3.3 20% 50V
1-124-245-11	s	CAP, ELECT 4.7 20% 35V
1-124-259-11	s	CAP, ELECT 4.7 20% 50V
1-124-462-11	s	CAP, ELECT 10 20% 16V
1-124-247-11	s	CAP, ELECT 10 20% 35V
1-124-261-11	s	CAP, ELECT 10 20% 50V
1-124-222-11	s	CAP, ELECT 22 20% 6.3V
1-124-234-11	s	CAP, ELECT 22 20% 16V
1-124-248-11	s	CAP, ELECT 22 20% 35V
1-124-431-11	s	CAP, ELECT 33 20% 4V
1-124-229-11	s	CAP, ELECT 33 20% 10V
1-124-242-11	s	CAP, ELECT 33 20% 25V
1-124-224-11	s	CAP, ELECT 47 20% 6.3V
1-124-236-11	s	CAP, ELECT 47 20% 16V
1-124-584-11	s	CAP, ELECT 100 20% 10V

Part No.	SP	Description
CAPACITOR, MICA, SILVERED		
1-107-019-00	s	CAP, MICA 1.0pF ±0.5pF 500V
1-107-039-00	s	CAP, MICA 1.2pF ±0.5pF 500V
1-107-040-00	s	CAP, MICA 1.5pF ±0.5pF 500V
1-107-041-00	s	CAP, MICA 1.8pF ±0.5pF 500V
1-107-042-00	s	CAP, MICA 2.2pF ±0.5pF 500V
1-107-043-00	s	CAP, MICA 2.7pF ±0.5pF 500V
1-107-044-00	s	CAP, MICA 3.3pF ±0.5pF 500V
1-107-045-00	s	CAP, MICA 3.9pF ±0.5pF 500V
1-107-046-00	s	CAP, MICA 4.7pF ±0.5pF 500V
1-107-026-00	s	CAP, MICA 5.1pF ±0.5pF 500V
1-107-047-00	s	CAP, MICA 5.6pF ±0.5pF 500V
1-107-048-00	s	CAP, MICA 6.8pF ±0.5pF 500V
1-107-049-00	s	CAP, MICA 8.2pF ±0.5pF 500V
1-107-202-00	s	CAP, MICA 10pF ± 5% 500V
1-107-203-00	s	CAP, MICA 11pF 5% 500V
1-107-204-00	s	CAP, MICA 12pF 5% 500V
1-107-205-00	s	CAP, MICA 13pF 5% 500V
1-107-206-00	s	CAP, MICA 15pF 5% 500V
1-107-207-00	s	CAP, MICA 16pF 5% 500V
1-107-208-00	s	CAP, MICA 18pF 5% 500V
1-107-209-00	s	CAP, MICA 20pF 5% 500V
1-107-210-00	s	CAP, MICA 22pF 5% 500V
1-107-211-00	s	CAP, MICA 24pF 5% 500V
1-107-157-00	s	CAP, MICA 27pF 5% 500V
1-107-158-00	s	CAP, MICA 30pF 5% 500V
1-107-159-00	s	CAP, MICA 33pF 5% 500V
1-107-074-00	s	CAP, MICA 36pF 5% 50V
1-107-075-00	s	CAP, MICA 39pF 5% 50V
1-107-076-00	s	CAP, MICA 43pF 5% 50V
1-107-077-00	s	CAP, MICA 47pF 5% 50V
1-107-164-00	s	CAP, MICA 51pF 5% 500V
1-107-165-00	s	CAP, MICA 56pF 5% 500V
1-107-166-00	s	CAP, MICA 62pF 5% 500V
1-107-036-00	s	CAP, MICA 68pF 5% 500V
1-107-167-00	s	CAP, MICA 75pF 5% 500V
1-107-083-00	s	CAP, MICA 82pF 5% 50V
1-107-086-00	s	CAP, MICA 91pF 5% 50V
1-107-085-00	s	CAP, MICA 100pF 5% 50V
1-107-086-00	s	CAP, MICA 110pF 5% 50V
1-107-087-00	s	CAP, MICA 120pF 5% 50V
1-109-538-00	s	CAP, MICA 130pF 5% 100V
1-109-539-00	s	CAP, MICA 150pF 5% 100V
1-107-090-00	s	CAP, MICA 160pF 5% 50V
1-109-540-00	s	CAP, MICA 180pF 5% 100V
1-109-541-00	s	CAP, MICA 200pF 5% 100V
1-109-542-00	s	CAP, MICA 220pF 5% 100V
1-109-543-00	s	CAP, MICA 270pF 5% 100V
1-109-547-00	s	CAP, MICA 330pF 5% 100V
1-109-549-00	s	CAP, MICA 390pF 5% 100V
1-109-633-00	s	CAP, MICA 470pF 2% 500V
1-109-555-00	s	CAP, MICA 560pF 5% 100V
1-109-635-00	s	CAP, MICA 470pF 2% 500V

Part No.	SP	Description
CAPACITOR, MYLAR		
1-130-467-00	s	CAP, MYLAR 470pF 5% 50V
1-130-468-00	s	CAP, MYLAR 560pF 5% 50V
1-130-469-00	s	CAP, MYLAR 680pF 5% 50V
1-130-470-00	s	CAP, MYLAR 820pF 5% 50V
1-130-471-00	s	CAP, MYLAR 1000pF 5% 50V
1-130-472-00	s	CAP, MYLAR 1200pF 5% 50V
1-130-473-00	s	CAP, MYLAR 1500pF 5% 50V
1-130-474-00	s	CAP, MYLAR 1800pF 5% 50V
1-130-475-00	s	CAP, MYLAR 2200pF 5% 50V
1-130-476-00	s	CAP, MYLAR 2700pF 5% 50V
1-130-477-00	s	CAP, MYLAR 3300pF 5% 50V
1-130-478-00	s	CAP, MYLAR 3900pF 5% 50V
1-130-479-00	s	CAP, MYLAR 4700pF 5% 50V
1-130-480-00	s	CAP, MYLAR 5600pF 5% 50V
1-130-481-00	s	CAP, MYLAR 6800pF 5% 50V
1-130-482-00	s	CAP, MYLAR 8200pF 5% 50V
1-130-483-00	s	CAP, MYLAR 0.01 5% 50V
1-130-484-00	s	CAP, MYLAR 0.012 5% 50V
1-130-485-00	s	CAP, MYLAR 0.015 5% 50V
1-130-486-00	s	CAP, MYLAR 0.018 5% 50V
1-130-487-00	s	CAP, MYLAR 0.022 5% 50V
1-130-488-00	s	CAP, MYLAR 0.027 5% 50V
1-130-489-00	s	CAP, MYLAR 0.033 5% 50V
1-130-490-11	s	CAP, MYLAR 0.039 5% 50V
1-130-491-00	s	CAP, MYLAR 0.047 5% 50V
1-130-492-11	s	CAP, MYLAR 0.056 5% 50V
1-130-493-00	s	CAP, MYLAR 0.068 5% 50V
1-130-494-11	s	CAP, MYLAR 0.082 5% 50V
1-130-495-00	s	CAP, MYLAR 0.1 5% 50V
1-130-496-00	s	CAP, MYLAR 0.12 5% 50V
1-130-497-00	s	CAP, MYLAR 0.15 5% 50V
1-130-498-00	s	CAP, MYLAR 0.18 5% 50V
1-130-499-00	s	CAP, MYLAR 0.22 5% 50V
1-136-502-11	s	CAP, MYLAR 0.33 5% 50V

Part No.	SP	Description
INDUCTOR, MICRO		
1-408-876-00	s	INDUCTOR, MICRO 0.18 5%
1-408-877-00	s	INDUCTOR, MICRO 0.22 5%
1-408-878-00	s	INDUCTOR, MICRO 0.33 5%
1-408-879-21	s	INDUCTOR, MICRO 0.47 5%
1-408-931-00	s	INDUCTOR, MICRO 0.56 5%
1-408-880-00	s	INDUCTOR, MICRO 0.68 5%
1-408-765-00	s	INDUCTOR, MICRO 0.82 5%
1-408-397-00	s	INDUCTOR, MICRO 1.0 5%
1-408-398-00	s	INDUCTOR, MICRO 1.2 5%
1-408-399-00	s	INDUCTOR, MICRO 1.5 5%
1-408-400-00	s	INDUCTOR, MICRO 1.8 5%
1-408-401-00	s	INDUCTOR, MICRO 2.2 5%
1-408-402-00	s	INDUCTOR, MICRO 2.7 5%
1-408-403-00	s	INDUCTOR, MICRO 3.3 5%
1-408-404-00	s	INDUCTOR, MICRO 3.9 5%
1-408-405-00	s	INDUCTOR, MICRO 4.7 5%
1-408-406-00	s	INDUCTOR, MICRO 5.6 5%
1-408-407-00	s	INDUCTOR, MICRO 6.8 5%
1-408-408-00	s	INDUCTOR, MICRO 8.2 5%
1-408-409-00	s	INDUCTOR, MICRO 10 5%
1-408-410-00	s	INDUCTOR, MICRO 12 5%
1-408-411-00	s	INDUCTOR, MICRO 15 5%
1-408-412-00	s	INDUCTOR, MICRO 18 5%
1-408-413-00	s	INDUCTOR, MICRO 22 5%
1-408-414-00	s	INDUCTOR, MICRO 27 5%
1-408-415-00	s	INDUCTOR, MICRO 33 5%
1-408-416-00	s	INDUCTOR, MICRO 39 5%
1-408-417-21	s	INDUCTOR, MICRO 47 5%
1-408-418-00	s	INDUCTOR, MICRO 56 5%
1-408-419-00	s	INDUCTOR, MICRO 68 5%
1-408-420-00	s	INDUCTOR, MICRO 82 5%
1-408-421-00	s	INDUCTOR, MICRO 100 5%
1-408-422-00	s	INDUCTOR, MICRO 120 5%
1-408-423-00	s	INDUCTOR, MICRO 150 5%
1-408-424-00	s	INDUCTOR, MICRO 180 5%
1-408-425-00	s	INDUCTOR, MICRO 220 5%
1-408-426-00	s	INDUCTOR, MICRO 270 5%
1-408-427-00	s	INDUCTOR, MICRO 330 5%
1-408-428-00	s	INDUCTOR, MICRO 390 5%
1-408-429-00	s	INDUCTOR, MICRO 470 5%

Part No.	SP	Description
RESISTOR, CARBON		
1-249-381-11	s	RES, CARBON 1.0 5% 1/6W
1-249-382-11	s	RES, CARBON 1.2 5% 1/6W
1-249-383-11	s	RES, CARBON 1.5 5% 1/6W
1-249-384-11	s	RES, CARBON 1.8 5% 1/6W
1-249-385-11	s	RES, CARBON 2.2 5% 1/6W
1-249-386-11	s	RES, CARBON 2.7 5% 1/6W
1-249-387-11	s	RES, CARBON 3.3 5% 1/6W
1-249-388-11	s	RES, CARBON 3.9 5% 1/6W
1-249-389-11	s	RES, CARBON 4.7 5% 1/6W
1-249-390-11	s	RES, CARBON 5.6 5% 1/6W
1-249-391-11	s	RES, CARBON 6.8 5% 1/6W
1-249-392-11	s	RES, CARBON 8.2 5% 1/6W
1-249-393-11	s	RES, CARBON 10 5% 1/6W
1-249-394-11	s	RES, CARBON 12 5% 1/6W
1-249-395-11	s	RES, CARBON 15 5% 1/6W
1-249-396-11	s	RES, CARBON 18 5% 1/6W
1-249-397-11	s	RES, CARBON 22 5% 1/6W
1-249-398-11	s	RES, CARBON 27 5% 1/6W
1-249-399-11	s	RES, CARBON 33 5% 1/6W
1-249-400-11	s	RES, CARBON 39 5% 1/6W
1-249-401-11	s	RES, CARBON 47 5% 1/6W
1-249-402-11	s	RES, CARBON 56 5% 1/6W
1-249-403-11	s	RES, CARBON 68 5% 1/6W
1-215-394-00	s	RES, METAL 75 1% 1/6W
1-249-404-11	s	RES, CARBON 82 5% 1/6W
1-249-405-11	s	RES, CARBON 100 5% 1/6W
1-249-406-11	s	RES, CARBON 120 5% 1/6W
1-249-407-11	s	RES, CARBON 150 5% 1/6W
1-249-408-11	s	RES, CARBON 180 5% 1/6W
1-249-409-11	s	RES, CARBON 220 5% 1/6W
1-249-410-11	s	RES, CARBON 270 5% 1/6W
1-249-411-11	s	RES, CARBON 330 5% 1/6W
1-249-412-11	s	RES, CARBON 390 5% 1/6W
1-249-413-11	s	RES, CARBON 470 5% 1/6W
1-249-414-11	s	RES, CARBON 560 5% 1/6W
1-249-415-11	s	RES, CARBON 680 5% 1/6W
1-249-416-11	s	RES, CARBON 820 5% 1/6W
1-249-417-11	s	RES, CARBON 1.0k 5% 1/6W
1-249-418-11	s	RES, CARBON 1.2k 5% 1/6W
1-249-419-11	s	RES, CARBON 1.5k 5% 1/6W
1-249-420-11	s	RES, CARBON 1.8k 5% 1/6W
1-249-421-11	s	RES, CARBON 2.2k 5% 1/6W
1-249-422-11	s	RES, CARBON 2.7k 5% 1/6W
1-249-423-11	s	RES, CARBON 3.3k 5% 1/6W
1-249-424-11	s	RES, CARBON 3.9k 5% 1/6W
1-249-425-11	s	RES, CARBON 4.7k 5% 1/6W
1-249-426-11	s	RES, CARBON 5.6k 5% 1/6W
1-249-427-11	s	RES, CARBON 6.8k 5% 1/6W
1-249-428-11	s	RES, CARBON 8.2k 5% 1/6W
1-249-429-11	s	RES, CARBON 10k 5% 1/6W
1-249-430-11	s	RES, CARBON 12k 5% 1/6W
1-249-431-11	s	RES, CARBON 15k 5% 1/6W
1-249-432-11	s	RES, CARBON 18k 5% 1/6W
1-249-433-11	s	RES, CARBON 22k 5% 1/6W
1-249-434-11	s	RES, CARBON 27k 5% 1/6W
1-249-435-11	s	RES, CARBON 33k 5% 1/6W
1-249-436-11	s	RES, CARBON 39k 5% 1/6W
1-249-437-11	s	RES, CARBON 47k 5% 1/6W
1-249-438-11	s	RES, CARBON 56k 5% 1/6W
1-249-439-11	s	RES, CARBON 68k 5% 1/6W

Part No.	SP	Description
RESISTOR, CARBON		
1-249-440-11	s	RES, CARBON 82k 5% 1/6W
1-249-441-11	s	RES, CARBON 100k 5% 1/6W
1-215-471-00	s	RES, METAL 120k 1% 1/6W
1-215-473-00	s	RES, METAL 150k 1% 1/6W
1-215-475-00	s	RES, METAL 180k 1% 1/6W
1-215-477-00	s	RES, METAL 220k 1% 1/6W
1-215-479-00	s	RES, METAL 270k 1% 1/6W
1-215-481-00	s	RES, METAL 330k 1% 1/6W
1-215-483-00	s	RES, METAL 390k 1% 1/6W
1-215-485-00	s	RES, METAL 470k 1% 1/6W
1-215-487-00	s	RES, METAL 560k 1% 1/6W
1-215-489-00	s	RES, METAL 680k 1% 1/6W
1-215-491-00	s	RES, METAL 820k 1% 1/6W
1-215-493-00	s	RES, METAL 1.0M 1% 1/6W

Part No.	SP	Description
RESISTOR, CHIP		
1-216-295-00	s	RES, CHIP 0 5% 1/10W
1-216-298-00	s	RES, CHIP 2.2 5% 1/10W
1-216-302-00	s	RES, CHIP 2.7 5% 1/10W
1-216-304-00	s	RES, CHIP 3.3 5% 1/10W
1-216-306-00	s	RES, CHIP 3.9 5% 1/10W
1-216-308-00	s	RES, CHIP 4.7 5% 1/10W
1-216-309-00	s	RES, CHIP 5.6 5% 1/10W
1-216-311-00	s	RES, CHIP 6.8 5% 1/10W
1-216-313-00	s	RES, CHIP 8.2 5% 1/10W
1-216-001-00	s	RES, CHIP 10 5% 1/10W
1-216-003-00	s	RES, CHIP 12 5% 1/10W
1-216-005-00	s	RES, CHIP 15 5% 1/10W
1-216-007-00	s	RES, CHIP 18 5% 1/10W
1-216-009-00	s	RES, CHIP 22 5% 1/10W
1-216-011-00	s	RES, CHIP 27 5% 1/10W
1-216-013-00	s	RES, CHIP 33 5% 1/10W
1-216-015-00	s	RES, CHIP 39 5% 1/10W
1-216-017-00	s	RES, CHIP 47 5% 1/10W
1-216-019-00	s	RES, CHIP 56 5% 1/10W
1-216-021-00	s	RES, CHIP 68 5% 1/10W
1-216-023-00	s	RES, CHIP 82 5% 1/10W
1-216-025-00	s	RES, CHIP 100 5% 1/10W
1-216-027-00	s	RES, CHIP 120 5% 1/10W
1-216-029-00	s	RES, CHIP 150 5% 1/10W
1-216-031-00	s	RES, CHIP 180 5% 1/10W
1-216-033-00	s	RES, CHIP 220 5% 1/10W
1-216-035-00	s	RES, CHIP 270 5% 1/10W
1-216-037-00	s	RES, CHIP 330 5% 1/10W
1-216-039-00	s	RES, CHIP 390 5% 1/10W
1-216-041-00	s	RES, CHIP 470 5% 1/10W
1-216-043-00	s	RES, CHIP 560 5% 1/10W
1-216-045-00	s	RES, CHIP 680 5% 1/10W
1-216-047-00	s	RES, CHIP 820 5% 1/10W
1-216-049-00	s	RES, CHIP 1k 5% 1/10W
1-216-051-00	s	RES, CHIP 1.2k 5% 1/10W
1-216-053-00	s	RES, CHIP 1.5k 5% 1/10W
1-216-055-00	s	RES, CHIP 1.8k 5% 1/10W
1-216-057-00	s	RES, CHIP 2.2k 5% 1/10W
1-216-059-00	s	RES, CHIP 2.7k 5% 1/10W
1-216-061-00	s	RES, CHIP 3.3k 5% 1/10W
1-216-063-00	s	RES, CHIP 3.9k 5% 1/10W
1-216-065-00	s	RES, CHIP 4.7k 5% 1/10W
1-216-067-00	s	RES, CHIP 5.6k 5% 1/10W
1-216-069-00	s	RES, CHIP 6.8k 5% 1/10W
1-216-071-00	s	RES, CHIP 8.2k 5% 1/10W
1-216-073-00	s	RES, CHIP 10k 5% 1/10W
1-216-075-00	s	RES, CHIP 12k 5% 1/10W
1-216-077-00	s	RES, CHIP 15k 5% 1/10W
1-216-079-00	s	RES, CHIP 18k 5% 1/10W
1-216-081-00	s	RES, CHIP 22k 5% 1/10W
1-216-083-00	s	RES, CHIP 27k 5% 1/10W
1-216-085-00	s	RES, CHIP 33k 5% 1/10W
1-216-087-00	s	RES, CHIP 39k 5% 1/10W
1-216-089-00	s	RES, CHIP 47k 5% 1/10W
1-216-091-00	s	RES, CHIP 56k 5% 1/10W

Part No.	SP	Description
RESISTOR, CHIP		
1-216-093-00	s	RES, CHIP 68k 5% 1/10W
1-216-095-00	s	RES, CHIP 82k 5% 1/10W
1-216-097-00	s	RES, CHIP 100k 5% 1/10W
1-216-099-00	s	RES, CHIP 120k 5% 1/10W
1-216-101-00	s	RES, CHIP 150k 5% 1/10W
1-216-103-00	s	RES, CHIP 180k 5% 1/10W
1-216-105-00	s	RES, CHIP 220k 5% 1/10W
1-216-107-00	s	RES, CHIP 270k 5% 1/10W
1-216-109-00	s	RES, CHIP 330k 5% 1/10W
1-216-111-00	s	RES, CHIP 390k 5% 1/10W
1-216-113-00	s	RES, CHIP 470k 5% 1/10W
1-216-115-00	s	RES, CHIP 560k 5% 1/10W
1-216-117-00	s	RES, CHIP 680k 5% 1/10W
1-216-119-00	s	RES, CHIP 820k 5% 1/10W
1-216-121-00	s	RES, CHIP 1.0M 5% 1/10W
1-216-123-00	s	RES, CHIP 1.2M 5% 1/10W
1-216-125-00	s	RES, CHIP 1.5M 5% 1/10W
1-216-127-00	s	RES, CHIP 1.8M 5% 1/10W
1-216-129-00	s	RES, CHIP 2.2M 5% 1/10W
1-216-131-00	s	RES, CHIP 2.7M 5% 1/10W
1-216-133-00	s	RES, CHIP 3.3M 5% 1/10W

Ref.No.	Parts No.	SP	Description
AU-72P BOARD			
	A-6713-324-A	o	MOUNTED CIRCUIT BOARD, AU-72P
C1	1-124-584-00	s	ELECT 100 20% 10V
C2	1-124-584-00	s	ELECT 100 20% 10V
C3	1-124-236-00	s	ELECT 47 20% 16V
C4	1-124-236-00	s	ELECT 47 20% 16V
C5	1-124-584-00	s	ELECT 100 20% 10V
C6	1-124-584-00	s	ELECT 100 20% 10V
C8	1-124-584-00	s	ELECT 100 20% 10V
C9	1-135-089-21	s	TANTAL. CHIP 6.8 10% 20V
C10	1-135-089-21	s	TANTAL. CHIP 6.8 10% 20V
C11	1-135-088-21	s	TANTAL. CHIP 2.2 10% 20V
C12	1-135-093-21	s	TANTAL. CHIP 10 10% 16V
C13	1-135-089-21	s	TANTAL. CHIP 6.8 10% 20V
C14	1-135-089-21	s	TANTAL. CHIP 6.8 10% 20V
C17	1-124-584-00	s	ELECT 100 20% 10V
C31	1-135-093-21	s	TANTAL. CHIP 10 10% 10V
C32	1-135-093-21	s	TANTAL. CHIP 10 10% 10V
C33	1-135-093-21	s	TANTAL. CHIP 10 10% 10V
C34	1-135-093-21	s	TANTAL. CHIP 10 10% 10V
2)C37	1-135-101-21	s	TANTAL. CHIP 22 10% 6.3V
C101	1-124-234-00	s	ELECT 22 20% 16V
C103	1-135-093-21	s	TANTAL. CHIP 10 10% 16V
C107	1-163-033-00	s	CERAMIC CHIP 0.022 10% 25V
C109	1-135-093-21	s	TANTAL. CHIP 10 10% 16V
C112	1-135-093-21	s	TANTAL. CHIP 10 10% 16V
C113	1-163-014-00	s	CERAMIC CHIP 2700PF 10% 50V
C117	1-163-033-00	s	CERAMIC CHIP 0.022 10% 25V
C119	1-135-093-21	s	TANTAL. CHIP 10 10% 16V
C120	1-135-101-21	s	TANTAL. CHIP 22 10% 6.3V
C121	1-135-098-21	s	TANTAL. CHIP 47 10% 16V
C123	1-135-093-21	s	TANTAL. CHIP 10 10% 16V
C125	1-109-631-00	s	MICA 330PF 1% 500V
C127	1-109-631-00	s	MICA 330PF 1% 500V
C155	1-124-584-00	s	ELECT 100 20% 10V
C157	1-135-093-21	s	TANTAL. CHIP 10 10% 16V
C158	1-135-093-21	s	TANTAL. CHIP 10 10% 16V
C160	1-135-071-21	s	TANTAL. CHIP 0.15 10% 35V
C161	1-135-071-21	s	TANTAL. CHIP 0.15 10% 35V
C162	1-135-093-21	s	TANTAL. CHIP 10 10% 16V
C201	1-124-234-00	s	ELECT 22 20% 16V
C203	1-135-093-21	s	TANTAL. CHIP 10 10% 16V
C207	1-163-033-00	s	CERAMIC CHIP 0.022 10% 25V
C209	1-135-093-21	s	TANTAL. CHIP 10 10% 16V
C212	1-135-093-21	s	TANTAL. CHIP 10 10% 16V
C213	1-163-014-00	s	CERAMIC CHIP 2700PF 10% 50V
C217	1-163-033-00	s	CERAMIC CHIP 0.022 10% 25V
C219	1-135-093-21	s	TANTAL. CHIP 10 10% 16V
C220	1-135-101-21	s	TANTAL. CHIP 22 10% 6.3V
C221	1-135-098-21	s	TANTAL. CHIP 22 10% 16V
C223	1-135-093-21	s	TANTAL. CHIP 10 10% 16V
C225	1-109-631-00	s	MICA 330PF 1% 500V
C227	1-109-631-00	s	MICA 330PF 1% 500V
C255	1-124-584-00	s	ELECT 100 20% 10V
C257	1-135-093-21	s	TANTAL. CHIP 10 10% 16V
C258	1-135-093-21	s	TANTAL. CHIP 10 10% 16V
C260	1-135-071-21	s	TANTAL. CHIP 0.15 10% 35V
C261	1-135-071-21	s	TANTAL. CHIP 0.15 10% 35V
C262	1-135-093-21	s	TANTAL. CHIP 10 10% 16V

Ref.No.	Parts No.	SP	Description
CN1	1-564-014-00	o	4P
	1-562-149-11	o	HOUSING, 4P
	1-564-026-21	o	CONTACT
CN2	1-564-003-00	o	4P
	1-562-149-11	o	HOUSING, 4P
	1-564-026-21	o	CONTACT
CN3	1-506-471-41	o	6P
	1-562-151-11	o	HOUSING, 6P
	1-564-026-21	o	CONTACT
CN4	1-564-002-00	o	3P
	1-562-148-11	o	HOUSING, 3P
	1-564-026-21	o	CONTACT
CN5	1-564-010-11	o	11P
	1-562-156-11	o	HOUSING, 11P
	1-564-026-21	o	CONTACT
CN6	1-564-007-00	o	8P
	1-562-153-11	o	HOUSING, 8P
	1-564-026-21	o	CONTACT
CN7	1-564-002-00	o	3P
	1-562-148-11	o	HOUSING, 3P
	1-564-026-21	o	CONTACT
CN8	1-564-003-00	o	4P
	1-562-149-11	o	HOUSING, 4P
	1-564-026-21	o	CONTACT
CP1	1-433-327-11	s	OSCILLATOR BLOCK, BIAS 134.0kHz
3)CP2	1-464-800-12	s	OSCILLATOR BLOCK, ERASE 65kHz
4)CP2	1-464-800-13	s	OSCILLATOR BLOCK, ERASE 65kHz
11)D1	8-719-100-48	s	RD5.2E-B2
12)D1	8-719-106-31	s	RD5.2M-B1
D2	8-719-100-05	s	1S2837
D3	8-719-100-05	s	1S2837
D4	8-719-100-05	s	1S2837
D5	8-719-100-05	s	1S2837
D6	8-719-100-05	s	1S2837
D7	8-719-100-03	s	1S2835
D8	8-719-100-05	s	1S2837
D12	8-719-101-23	s	1SS123
D13	8-719-100-05	s	1S2837
D14	8-719-100-05	s	1S2837
D16	8-719-100-05	s	1S2837
D17	8-719-101-23	s	1SS123
IC1	8-759-745-64	s	NJM4560M(JRC)
30)IC2	8-759-200-67	s	TC4001BF(TOSHIBA)
31)IC2	8-759-008-74	s	MC14001BF(MOTOROLA)
IC3	1-807-983-11	s	BH1810
IC4	8-759-700-54	s	NJM7809A
IC101	8-759-700-84	s	NJM2041M-D(JRC)
IC102	8-759-700-84	s	NJM2041M-D(JRC)
IC103	8-759-700-09	s	NJM2043M-D(JRC)
IC104	8-759-745-64	s	NJM4560M(JRC)
IC201	8-759-700-84	s	NJM2041M-D(JRC)
IC202	8-759-700-84	s	NJM2041M-D(JRC)
IC203	8-759-700-09	s	NJM2043M-D(JRC)
L5	1-410-722-21	s	CHIP 270
L6	1-410-722-21	s	CHIP 270

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Ref.No.	Parts No.	SP	Description
LV6	1-410-853-12	s	VAR 4.5mH
Q1	8-729-162-44	s	2SB624-BV4
Q2	8-729-159-64	s	2SD596
Q3	8-729-100-66	s	2SC1623
Q4	8-729-100-66	s	2SC1623
Q5	8-729-100-76	s	2SA812
Q6	8-729-202-38	s	2SC3326N
Q7	8-729-202-38	s	2SC3326N
Q8	8-729-100-66	s	2SC1623
Q9	8-729-100-76	s	2SA812
Q10	8-729-202-38	s	2SC3326N
Q11	8-729-202-38	s	2SC3326N
Q12	8-729-100-76	s	2SA812
Q13	8-729-100-76	s	2SA812
Q14	8-729-202-38	s	2SC3326N
Q16	8-729-202-38	s	2SC3326N
Q18	8-729-202-38	s	2SC3326N
Q19	8-729-202-38	s	2SC3326N
Q20	8-729-202-38	s	2SC3326N
Q21	8-729-202-38	s	2SC3326N
Q22	8-729-901-01	s	DTC144EK
Q23	8-729-901-01	s	DTC144EK
Q24	8-729-100-76	s	2SA812
Q25	8-729-202-38	s	2SC3326N
Q26	8-729-100-76	s	2SA812
Q27	8-729-202-38	s	2SC3326N
Q29	8-729-202-38	s	2SC3326N
Q30	8-729-100-76	s	2SA812
Q31	8-729-202-38	s	2SC3326N
Q34	8-729-901-01	s	DTC144EK
Q35	8-729-202-38	s	2SC3326N
Q36	8-729-202-38	s	2SC3326N
Q37	8-729-202-38	s	2SC3326N
Q38	8-729-100-76	s	2SA812
Q39	8-729-901-06	s	DTA144EK
Q40	8-729-901-01	s	DTC144EK
Q41	8-729-202-38	s	2SC3326N
Q42	8-729-220-93	s	2SK209-G
Q43	8-729-220-93	s	2SK209-G
Q44	8-729-901-01	s	DTC144EK
Q45	8-729-901-01	s	DTC144EK
Q46	8-729-202-38	s	2SC3326N
Q47	8-729-202-38	s	2SC3326N
Q48	8-729-100-76	s	2SA812
Q49	8-729-901-01	s	DTC144EK
Q50	8-729-901-06	s	DTA144EK
Q51	8-729-100-66	s	2SC1623
R152	1-216-625-11	s	METAL CHIP 82 0.5% 1/10W
4)R171	1-216-684-11	s	METAL CHIP 24k 0.5% 1/10W
4)R271	1-216-684-11	s	METAL CHIP 24k 0.5% 1/10W
1)R181	1-216-059-00	s	METAL CHIP 2700 0.5% 1/10W
2)R181	1-216-660-11	s	METAL CHIP 2400 0.5% 1/10W
R252	1-216-625-11	s	METAL CHIP 82 0.5% 1/10W
1)R281	1-216-059-00	s	METAL CHIP 2700 0.5% 1/10W
2)R281	1-216-660-11	s	METAL CHIP 2400 0.5% 1/10W
RV1	1-237-030-11	s	VAR, CERMET 100
RV2	1-237-031-11	s	VAR, CERMET 200
RV5	1-228-456-00	s	VAR, CERMET 1k
RV6	1-237-034-11	s	VAR, CERMET 2k
RV101	1-237-036-11	s	VAR, CERMET 10k

Ref.No.	Parts No.	SP	Description
RV102	1-237-037-11	s	VAR, CERMET 20k
RV103	1-237-037-11	s	VAR, CERMET 20k
RV104	1-237-036-11	s	VAR, CERMET 10k
RV105	1-237-037-11	s	VAR, CERMET 20k
RV106	1-237-037-11	s	VAR, CERMET 20k
RV107	1-237-037-11	s	VAR, CERMET 20k
RV108	1-237-040-11	s	VAR, CERMET 200k
RV109	1-237-035-11	s	VAR, CERMET 5k
RV110	1-237-036-11	s	VAR, CERMET 10k
RV111	1-237-037-11	s	VAR, CERMET 20k
2)RV112	1-237-032-11	s	VAR, CERMET 500
RV201	1-237-036-11	s	VAR, CERMET 10k
RV202	1-237-037-11	s	VAR, CERMET 20k
RV204	1-237-036-11	s	VAR, CERMET 10k
RV205	1-237-037-11	s	VAR, CERMET 20k
RV207	1-237-037-11	s	VAR, CERMET 20k
RV208	1-237-040-11	s	VAR, CERMET 200k
RV209	1-237-035-11	s	VAR, CERMET 5k
RV210	1-237-036-11	s	VAR, CERMET 10k
RV211	1-237-037-11	s	VAR, CERMET 20k
2)RV212	1-237-032-11	s	VAR, CERMET 500
S1	1-570-619-11	s	DIP
S2	1-570-619-11	s	DIP

CM-20 BOARD

	A-6725-565-A	o	MOUNTED CIRCUIT BOARD, CM-20
D1	8-719-101-23	s	1SS123
D2	8-719-101-23	s	1SS123
Q1	8-729-901-01	s	DTC144EK
Q2	8-729-901-06	s	DTA144EK
Q3	8-729-177-32	s	2SD773
R1	1-247-690-11	s	CARBON 15 5% 1/4W
R3	1-216-748-11	s	METAL CHIP 39k 5% 1/10W

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Ref.No.	Parts No.	SP	Description
CN-121 BOARD			
	1-622-627-11	o	PRINTED CIRCUIT BOARD, CN-121
C1	1-124-563-11	s	ELECT 2200 20% 25V
CN6001	1-564-207-00	o	6P
	1-562-256-00	o	HOUSING, 6P
	1-562-260-21	o	CONTACT
CN6002	1-564-208-00	s	8P
	1-562-257-00	o	HOUSING, 8P
	1-562-260-21	o	CONTACT
CN6003	1-561-727-11	o	HOUSING, 4P
	1-535-366-21	o	CONTACT
CN6004	1-564-002-00	o	3P
	1-562-148-11	o	HOUSING, 3P
	1-564-026-21	o	CONTACT
CN6005	1-564-205-00	o	4P
	1-562-254-00	o	HOUSING, 4P
	1-562-260-21	o	CONTACT
CN6006	1-564-205-00	o	4P
	1-562-254-00	o	HOUSING, 4P
	1-562-260-21	o	CONTACT
CN6007	1-564-548-11	o	5P, BOARD TO BOARD
CN6008	1-564-001-11	o	2P
	1-562-147-11	o	HOUSING, 2P
	1-564-026-21	o	CONTACT
CN6009	1-564-205-00	o	4P
	1-562-254-00	o	HOUSING, 4P
	1-562-260-21	o	CONTACT
CN6010	1-564-205-00	o	4P
	1-562-254-00	o	HOUSING, 4P
	1-562-260-21	o	CONTACT

Ref.No.	Parts No.	SP	Description
CN-142 BOARD			
	1-622-628-11	o	PRINTED CIRCUIT BOARD, CN-142
CN4001	1-564-195-00	o	2P
	1-562-252-11	o	HOUSING, 2P
	1-562-260-21	o	CONTACT
CN4002	1-564-020-00	o	10P
	1-562-155-11	o	HOUSING, 10P
	1-564-026-21	o	CONTACT
CN4003	1-564-020-00	o	10P
	1-562-155-11	o	HOUSING, 10P
	1-564-026-21	o	CONTACT
CN4004	1-563-864-21	o	24P
CN4005	1-564-016-00	o	6P
	1-562-151-11	o	HOUSING, 6P
	1-564-026-21	o	CONTACT
CN4006	1-564-018-11	o	8P
	1-562-153-11	o	HOUSING, 8P
	1-564-026-21	o	CONTACT
CN4007	1-564-012-00	o	2P
	1-562-147-11	o	HOUSING, 2P
	1-564-026-21	o	CONTACT
CN4008	1-564-012-00	o	2P
	1-562-147-11	o	HOUSING, 2P
	1-564-026-21	o	CONTACT
CN4009	1-564-013-00	o	3P
	1-562-148-11	o	HOUSING, 3P
	1-564-026-21	o	CONTACT
CN4010	1-564-198-00	o	5P
	1-562-255-11	o	HOUSING, 5P
	1-562-260-21	o	CONTACT

Ref.No.	Parts No.	SP	Description
CT-73 BOARD			
	35)1-622-621-11	o	PRINTED CIRCUIT BOARD, CT-73
	36)1-622-621-14	o	PRINTED CIRCUIT BOARD, CT-73
S1	1-571-064-11	s	MICRO
CT-85 BOARD			
	35)1-622-633-12	o	PRINTED CIRCUIT BOARD, CT-85
	36)1-622-633-13	o	PRINTED CIRCUIT BOARD, CT-85
D1	8-719-945-56	s	SLN-34VT3
RV1	1-230-337-11	s	VAR, CARBON 10k
RV2	1-230-337-11	s	VAR, CARBON 10k
RV3	1-230-337-11	s	VAR, CARBON 10k
RV4	1-230-337-11	s	VAR, CARBON 10k
DC-27 BOARD			
	1-622-634-11	o	PRINTED CIRCUIT BOARD, DC-27
D1	8-719-908-00	s	ESAC33-02CS

Ref.No.	Parts No.	SP	Description
DD-5P BOARD			
	3)A-6725-577-B	o	MOUNTED CIRCUIT BOARD, DD-5P
	4)A-6725-566-B	o	MOUNTED CIRCUIT BOARD, DD-5
C1	1-135-125-21	s	TANTAL. CHIP 33 20% 10V
C3	1-124-120-11	s	ELECT 220 20% 25V
4)C6	1-124-120-11	s	ELECT 220 20% 25V
CN1	1-564-007-00	o	8P
	1-562-153-11	o	HOUSING, 8P
	1-564-026-21	o	CONTACT
CN2	1-564-001-11	o	2P
	1-562-147-11	o	HOUSING, 2P
	1-564-026-21	o	CONTACT
D1	8-719-982-04	s	ERB81
D2	8-719-982-04	s	ERB81
IC1	8-749-911-54	s	BX1154(SONY)
L1	1-408-518-00	s	CHOKE
R3	1-216-097-00	s	RES, CHIP 100k 5% 1/10W

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Ref.No.	Parts No.	SP	Description
DD-10 BOARD			
	1-622-637-11	o	PRINTED CIRCUIT BOARD, DD-10
DC54	1-464-758-11	s	CONVERTER, DC-DC (CD-54)
DR-48 BOARD			
	A-6717-446-E	o	MOUNTED CIRCUIT BOARD, DR-48
C1	1-124-343-00	s	ELECT 2200 20% 16V
C2	1-124-343-00	s	ELECT 2200 20% 16V
C3	1-124-445-00	s	ELECT 100 20% 16V
C8	1-131-363-00	s	TANTAL. 4.7 10% 20V
C9	1-131-363-00	s	TANTAL. 4.7 10% 20V
CN1	1-562-963-21	o	10P
CN2	1-564-001-11	o	2P
	1-562-147-11	o	HOUSING, 2P
	1-564-026-21	o	CONTACT
CN3	1-564-002-00	o	3P
	1-562-148-11	o	HOUSING, 3P
	1-564-026-21	o	CONTACT
D1	8-719-200-02	s	10E2
D2	8-719-200-02	s	10E2
D3	8-719-200-02	s	10E2
D4	8-719-100-05	s	1S2837
D5	8-719-100-05	s	1S2837
49) D6	8-719-101-73	s	RD9.1E-L2
50) D6	8-719-110-14	s	RD9.1ES-B2
D7	8-719-200-02	s	10E2
IC1	8-741-107-10	s	SX1071(SONY)
IC3	8-759-143-65	s	uPC14305H(NEC)
IC4	8-759-600-24	s	M54543L(MITSUBISHI)
Q1	8-729-901-01	s	DTC144EK
Q2	8-729-901-06	s	DTA144EK
Q3	8-729-100-76	s	2SA812
Q4	8-729-116-42	s	2SD1164
DUS-182 BOARD			
	1-623-135-11	o	PRINTED CIRCUIT BOARD, DUS-182
C1	1-124-556-11	s	ELECT 2200 20% 16V

Ref.No.	Parts No.	SP	Description
1) **DUS-256 BOARD** (FOR SS-31P BOARD)			
			All of the component parts on the DUS-256 board are supplied together when you order SS-31P board.
	1-626-530-11	o	PRINTED CIRCUIT BOARD, DUS-256
Q9	8-729-901-01	s	DTC144EK
Q10	8-729-901-01	s	DTC144EK
23) **DUS-296 BOARD**			
			All of the component parts on the DUS-296 board are supplied together when you order SS-31P board.
D215	8-719-104-31	s	1S2838
FL-38 BOARD			
	1-622-625-11	o	PRINTED CIRCUIT BOARD, FL-38
CN6011	1-564-210-11	o	12P
HP-34 BOARD			
	1-622-632-11	o	PRINTED CIRCUIT BOARD, HP-34
CN9012	1-507-980-11	s	JACK
KY-94 BOARD			
	1-622-616-11	o	PRINTED CIRCUIT BOARD, KY-94
41) D1	8-719-920-65	s	GL-1HD1
42) D1	8-719-049-48	s	LT1D11A
41) D2	8-719-920-65	s	GL-1HD1
42) D2	8-719-049-48	s	LT1D11A
41) D3	8-719-920-65	s	GL-1HD1
42) D3	8-719-049-48	s	LT1D11A
S1	1-554-371-00	s	TACT "STOP"
S2	1-554-371-00	s	TACT "FFWD"
S3	1-554-371-00	s	TACT "PLAY"
S4	1-554-371-00	s	TACT "REW"
S5	1-554-371-00	s	TACT "EJECT"
PA-53 BOARD			
	A-6725-563-A	o	MOUNTED CIRCUIT BOARD, PA-53
C3	1-135-093-21	s	TANTAL. CHIP 10 10% 16V
C13	1-135-093-21	s	TANTAL. CHIP 10 10% 16V

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Ref.No.	Parts No.	SP	Description
CN1	1-561-725-11	o	HOUSING, 2P
	1-535-366-21	o	CONTACT
CN2	1-561-725-11	o	HOUSING, 2P
	1-535-366-21	o	CONTACT
CN3	1-561-725-11	o	HOUSING, 2P
	1-535-366-21	o	CONTACT
CN4	1-561-726-11	o	HOUSING, 3P
	1-535-366-21	o	CONTACT
CN5	1-561-726-11	o	HOUSING, 3P
	1-535-366-21	o	CONTACT
H9004	8-825-749-02	s	HEAD, AV PP8244-2103
IC1	8-759-745-64	s	NJM4560M(JRC)
R1	1-216-748-11	s	METAL CHIP 39k 5% 1/10W
R11	1-216-748-11	s	METAL CHIP 39k 5% 1/10W

PTC-11 BOARD

	1-622-626-11	o	PRINTED CIRCUIT BOARD, PTC-11
CN1	1-560-592-11	o	3P
PH1	8-719-913-55	s	GP-2804-B

SE-30 BOARD

	1-622-629-11	o	PRINTED CIRCUIT BOARD, SE-30
CN1	1-563-860-21	o	5P
CN2	1-564-001-11	o	2P
	1-562-147-11	o	HOUSING, 2P
	1-564-026-21	o	CONTACT

SE-60 BOARD

	1-622-630-11	o	PRINTED CIRCUIT BOARD, SE-60
PH1	8-719-907-32	s	GP-1L04

SS-31P BOARD

This board include the DUS-245 and DUS-194 boards.

⚠	A-6715-377-A	o	MOUNTED CIRCUIT BOARD, SS-31P
C1	1-135-083-00	s	TANTAL. CHIP 0.47 10% 25V
C18	1-163-033-00	s	CERAMIC CHIP 0.022 10% 25V
C19	1-135-093-21	s	TANTAL. CHIP 10 10% 16V
C21	1-163-033-00	s	CERAMIC CHIP 0.022 10% 25V
C28	1-135-093-21	s	TANTAL. CHIP 10 10% 16V

Ref.No.	Parts No.	SP	Description
C30	1-135-091-00	s	TANTAL. CHIP 1 10% 16V
C31	1-135-070-00	s	TANTAL. CHIP 0.1 10% 35V
C33	1-135-087-21	s	TANTAL. CHIP 0.68 10% 20V
C34	1-135-087-21	s	TANTAL. CHIP 0.68 10% 20V
C44	1-135-093-21	s	TANTAL. CHIP 10 10% 16V
C45	1-124-236-00	s	ELECT 47 20% 10V
C49	1-135-070-00	s	TANTAL. CHIP 0.1 10% 35V
C52	1-124-120-11	s	ELECT 220 20% 25V
C57	1-135-091-00	s	TANTAL. CHIP 1 10% 16V
C63	1-124-478-00	s	ELECT 100 20% 25V
C65	1-124-584-00	s	ELECT 100 20% 10V
C67	1-124-584-00	s	ELECT 100 20% 10V
C69	1-124-120-11	s	ELECT 220 20% 25V
C74	1-135-093-21	s	TANTAL. CHIP 10 10% 16V
C152	1-135-093-21	s	TANTAL. CHIP 10 10% 16V
C154	1-124-477-11	s	ELECT 47 20% 25V
C156	1-124-120-11	s	ELECT 220 20% 25V
8)C157	1-135-097-21	s	TANTAL. CHIP 15 10% 10V
8)C158	1-135-088-21	s	TANTAL. CHIP 2.2 10% 20V
C201	1-135-101-21	s	TANTAL. CHIP 22 10% 6.3V
C202	1-135-101-21	s	TANTAL. CHIP 22 10% 6.3V
C203	1-135-101-21	s	TANTAL. CHIP 22 10% 6.3V
C209	1-135-091-00	s	TANTAL. CHIP 1 10% 16V
C210	1-135-088-21	s	TANTAL. CHIP 2.2 10% 20V
C213	1-135-091-00	s	TANTAL. CHIP 1 10% 16V
C214	1-135-091-00	s	TANTAL. CHIP 1 10% 16V
C215	1-135-091-00	s	TANTAL. CHIP 1 10% 16V
C218	1-135-091-00	s	TANTAL. CHIP 1 10% 16V
C219	1-135-091-00	s	TANTAL. CHIP 1 10% 16V
C220	1-135-091-00	s	TANTAL. CHIP 1 10% 16V
C222	1-135-093-21	s	TANTAL. CHIP 10 10% 16V
C223	1-135-083-00	s	TANTAL. CHIP 0.47 10% 25V
C224	1-135-096-21	s	TANTAL. CHIP 4.7 10% 10V
C225	1-135-093-21	s	TANTAL. CHIP 10 10% 16V
C245	1-135-093-21	s	TANTAL. CHIP 10 10% 16V
C265	1-163-038-00	s	CERAMIC CHIP 0.1 50V
C501	1-135-093-21	s	TANTAL. CHIP 10 10% 16V
C503	1-135-091-00	s	TANTAL. CHIP 1 10% 16V
C505	1-135-070-00	s	TANTAL. CHIP 0.1 10% 35V
C510	1-135-091-00	s	TANTAL. CHIP 1 10% 16V
C516	1-135-091-00	s	TANTAL. CHIP 1 10% 16V
C601	1-125-447-11	s	DOUBLE LAYERS 1F 5.5V
C713	1-135-091-00	s	TANTAL. CHIP 1 10% 16V
C731	1-135-072-21	s	TANTAL. CHIP 0.22 10% 35V
C732	1-135-072-21	s	TANTAL. CHIP 0.22 10% 35V
CN102	1-563-865-21	o	30P
CN103	1-562-964-21	o	14P
CN104	1-563-865-21	o	30P
CN201	1-564-009-00	o	10P
	1-562-155-11	o	HOUSING, 10P
	1-564-026-21	o	CONTACT
CN202	1-564-005-00	o	6P
	1-562-151-11	o	HOUSING, 6P
	1-564-026-21	o	CONTACT
CN203	1-564-001-11	o	2P
	1-562-147-11	o	HOUSING, 2P
	1-564-026-21	o	CONTACT
CN204	1-564-001-11	o	2P
	1-562-147-11	o	HOUSING, 2P
	1-564-026-21	o	CONTACT
CN205	1-564-001-11	o	2P
	1-562-147-11	o	HOUSING, 2P
	1-564-026-21	o	CONTACT

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Ref.No.	Parts No.	SP	Description
CN206	1-564-002-00	o	3P
	1-562-148-11	o	HOUSING, 3P
	1-564-026-21	o	CONTACT
CN207	1-564-002-00	o	3P
	1-562-148-11	o	HOUSING, 3P
	1-564-026-21	o	CONTACT
CN209	1-564-005-00	o	6P
	1-562-151-11	o	HOUSING, 6P
	1-564-026-21	o	CONTACT
CN210	1-564-007-00	o	8P
	1-562-153-11	o	HOUSING, 8P
	1-564-026-21	o	CONTACT
CN211	1-564-002-00	o	3P
	1-562-148-11	o	HOUSING, 3P
	1-564-026-21	o	CONTACT
CN212	1-564-008-00	o	9P
	1-562-154-11	o	HOUSING, 9P
	1-564-026-21	o	CONTACT
CN213	1-564-001-11	o	2P
	1-562-147-11	o	HOUSING, 2P
	1-564-026-21	o	CONTACT
CN214	1-564-002-00	o	3P
	1-562-148-11	o	HOUSING, 3P
	1-564-026-21	o	CONTACT
CN215	1-564-001-11	o	2P
	1-562-147-11	o	HOUSING, 2P
	1-564-026-21	o	CONTACT
D1	8-719-100-05	s	1S2837
D2	8-719-101-23	s	1SS123
D3	8-719-101-23	s	1SS123
D4	8-719-100-03	s	1S2835
D5	8-719-100-05	s	1S2837
D6	8-719-982-04	s	RAB81-004
D7	8-719-100-03	s	1S2835
D8	8-719-100-05	s	1S2837
D9	8-719-100-05	s	1S2837
D12	8-719-100-05	s	1S2837
D15	8-719-100-03	s	1S2835
D16	8-719-100-05	s	1S2837
D17	8-719-100-05	s	1S2837
D18	8-719-101-23	s	1SS123
D19	8-719-100-03	s	1S2835
D22	8-719-100-05	s	1S2837
D23	8-719-101-23	s	1SS123
D27	8-719-100-05	s	1S2837
D28	8-719-100-03	s	1S2835
D29	8-719-100-03	s	1S2835
1)D30	8-719-911-19	s	1SS119
2)D30	8-719-100-05	s	1S2837
D152	8-719-101-23	s	1SS123
D155	8-719-982-04	s	RAB81-004
D156	8-719-100-05	s	1S2837
D201	8-719-100-05	s	1S2837
D202	8-719-101-23	s	1SS123
D203	8-719-101-23	s	1SS123
D204	8-719-100-05	s	1S2837
D205	8-719-100-03	s	1S2835
D206	8-719-100-05	s	1S2837
D207	8-719-100-05	s	1S2837
D208	8-719-100-03	s	1S2835
D211	8-719-100-03	s	1S2835
D212	8-719-100-05	s	1S2837
D213	8-719-100-05	s	1S2837
D214	8-719-100-03	s	1S2835
D701	8-719-100-03	s	1S2835
D702	8-719-100-03	s	1S2835
D711	8-719-100-05	s	1S2837
D721	8-719-911-19	s	1SS119

Ref.No.	Parts No.	SP	Description
IC1	8-759-105-85	s	uPD6111G(NEC)
11)IC2	8-759-972-91	s	M38B7505M-101FP-5057
12)IC2	8-759-980-62	s	M38B505-1014M
IC3	1-807-984-12	s	BH1811
IC4	1-807-985-12	s	BH1812
30)IC5	8-759-200-67	s	TC4001BF(TOSHIBA)
31)IC5	8-759-008-74	s	MC14001BF(MOTOROLA)
30)IC6	8-759-200-99	s	TC4051BF(TOSHIBA)
31)IC6	8-759-009-03	s	MC14051BF(MOTOROLA)
IC7	8-789-100-94	s	uPC358G2(NEC)
IC8	8-759-928-09	s	TLC27M2CP8(TI)
IC9	8-759-700-07	s	NJM2903M(JRC)
30)IC10	8-759-200-68	s	TC4011BF(TOSHIBA)
31)IC10	8-759-008-79	s	MC14011BF(MOTOROLA)
11)IC11	8-759-200-81	s	TC4053BF(TOSHIBA)
37)IC11	8-759-208-11	s	TC4053BFNB(TOSHIBA)
31)IC11	8-759-300-71	s	HD14053BFP(HITACHI)
IC12	8-759-700-07	s	NJM2903M(JRC)
IC13	8-759-928-09	s	TLC27M2CP8(TI)
IC14	8-759-928-09	s	TLC27M2CP8(TI)
30)IC15	8-759-200-68	s	TC4011BF(TOSHIBA)
31)IC15	8-759-008-79	s	MC14011BF(MOTOROLA)
30)IC16	8-759-200-67	s	TC4001BF(TOSHIBA)
31)IC16	8-759-008-74	s	MC14001BF(MOTOROLA)
30)IC17	8-759-200-78	s	TC4030BF(TOSHIBA)
31)IC17	8-759-009-11	s	MC14070BF(MOTOROLA)
IC18	8-759-300-71	s	HD14053BFP(HITACHI)
IC19	8-759-928-09	s	TLC27M2CP8(TOSHIBA)
IC20	8-759-928-09	s	TLC27M2CP8(TOSHIBA)
IC21	8-759-700-07	s	NJM2903M(JRC)
IC22	8-759-928-09	s	TLC27M2CP8(TI)
30)IC23	8-759-200-90	s	TC4538BF(TOSHIBA)
31)IC23	8-759-009-51	s	MC14538BF(MOTOROLA)
IC24	8-759-205-78	s	TC5040113BF(TOSHIBA)
11)IC25	8-759-200-81	s	TC4053BF(TOSHIBA)
37)IC25	8-759-208-11	s	TC4053BFNB(TOSHIBA)
31)IC25	8-759-300-71	s	HD14053BFP(HITACHI)
IC26	8-759-928-09	s	TLC27M2CP8(TI)
IC27	8-759-205-78	s	TC5040113BF(TOSHIBA)
30)IC28	8-759-200-67	s	TC4001BF(TOSHIBA)
31)IC28	8-759-008-74	s	MC14001BF(MOTOROLA)
30)IC29	8-759-200-68	s	TC4011BF(TOSHIBA)
31)IC29	8-759-008-79	s	MC14011BF(MOTOROLA)
11)IC30	8-759-200-81	s	TC4053BF(TOSHIBA)
37)IC30	8-759-208-11	s	TC4053BFNB(TOSHIBA)
31)IC30	8-759-009-07	s	MC14053BF(MOTOROLA)
30)IC31	8-759-200-68	s	TC4011BF(TOSHIBA)
31)IC31	8-759-008-79	s	MC14011BF(MOTOROLA)
30)IC32	8-759-200-68	s	TC4011BF(TOSHIBA)
31)IC32	8-759-008-79	s	MC14011BF(MOTOROLA)
30)IC33	8-759-200-90	s	TC4538BF(TOSHIBA)
31)IC33	8-759-009-51	s	MC14538BF(MOTOROLA)
30)IC34	8-759-200-90	s	TC4538BF(TOSHIBA)
31)IC34	8-759-009-51	s	MC14538BF(MOTOROLA)
IC35	8-759-981-48	s	TL082M(TI)
IC36	8-759-708-05	s	NJM78L05A(JRC)
11)IC201	8-759-972-90	s	M38B7551M-201FP-5060
12)IC201	8-759-983-42	s	M38B551-322M
30)IC202	8-759-200-88	s	TC4512BF(TOSHIBA)
31)IC202	8-759-009-37	s	MC14512BF(MOTOROLA)
30)IC203	8-759-200-88	s	TC4512BF(TOSHIBA)
31)IC203	8-759-009-37	s	MC14512BF(MOTOROLA)
IC204	8-759-102-82	s	uPD82C43G(NEC)
IC205	8-759-102-82	s	uPD82C43G(NEC)
IC206	8-759-201-61	s	TC40H004F(TOSHIBA)

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Ref.No.	Parts No.	SP	Description
IC207	8-759-203-93	s	TC40H393F(TOSHIBA)
30)IC208	8-759-200-73	s	TC4020BF(TOSHIBA)
31)IC208	8-759-008-88	s	MC14020BF(MOTOROLA)
30)IC209	8-759-200-82	s	TC4069UBF(TOSHIBA)
31)IC209	8-759-009-10	s	MC14069UBF(MOTOROLA)
30)IC210	8-759-200-68	s	TC4011BF(TOSHIBA)
31)IC210	8-759-008-79	s	MC14011BF(MOTOROLA)
30)IC211	8-759-200-90	s	TC4538BF(TOSHIBA)
31)IC211	8-759-009-51	s	MC14538BF(MOTOROLA)
IC212	8-759-700-07	s	NJM2903M(JRC)
IC213	8-759-928-09	s	TLC27M2CPS(TI)
IC214	1-807-986-11	s	SN1813
IC215	1-807-986-11	s	SN1813
30)IC216	8-759-200-82	s	TC4069UBF(TOSHIBA)
31)IC216	8-759-009-10	s	MC14069UBF(MOTOROLA)
30)IC217	8-759-200-68	s	TC4011BF(TOSHIBA)
31)IC217	8-759-008-79	s	MC14011BF(MOTOROLA)
IC220	8-759-746-75	s	MBM27C64-30CV
L7	1-459-155-00	s	WITH CORE 45
L9	1-408-518-00	s	CHOKE
L10	1-410-709-21	s	CHIP 22
L151	1-408-518-00	s	CHOKE
L201	1-407-510-00	s	MICRO 33mH
L202	1-407-510-00	s	MICRO 33mH
L204	1-410-709-21	s	CHIP 22
L205	1-410-709-21	s	CHIP 22
L206	1-408-947-00	s	MICRO 2.2mH
Q2	8-729-400-76	s	2SD1030
Q3	8-729-216-22	s	2SA1162
Q4	8-729-216-22	s	2SA1162
Q5	8-729-400-76	s	2SD1030
Q7	8-729-220-93	s	2SK209-G
Q12	8-729-901-01	s	DTC144EK
Q13	8-729-901-01	s	DTC144EK
Q14	8-729-100-66	s	2SC1623
Q15	8-729-901-01	s	DTC144EK
Q16	8-729-901-06	s	DTA144EK
Q17	8-729-216-22	s	2SA1162
Q18	8-729-177-32	s	2SD773
Q20	8-729-400-76	s	2SD1030
Q26	8-729-216-22	s	2SA1162
Q27	8-729-220-93	s	2SK209-G
Q28	8-729-901-01	s	DTC144EK
Q29	8-729-901-01	s	DTC144EK
Q30	8-729-220-93	s	2SK209-G
Q32	8-729-901-01	s	DTC144EK
Q33	8-729-901-06	s	DTA144EK
Q37	8-729-216-22	s	2SA1162
Q38	8-729-100-66	s	2SC1623
Q40	8-729-901-01	s	DTC144EK
Q41	8-729-901-01	s	DTC144EK
Q42	8-729-901-01	s	DTC144EK
Q43	8-729-901-01	s	DTC144EK
Q44	8-729-216-22	s	2SA1162
Q151	8-729-901-01	s	DTC144EK
Q152	8-729-901-06	s	DTA144EK
Q153	8-729-901-01	s	DTC144EK
Q154	8-729-177-32	s	2SD773
Q157	8-729-113-32	s	2SB733
Q159	8-729-901-06	s	DTA144EK
Q160	8-729-177-32	s	2SD773
Q161	8-729-113-32	s	2SB733

Ref.No.	Parts No.	SP	Description
Q163	8-729-901-06	s	DTA144E
Q164	8-729-177-32	s	2SD773
Q165	8-729-901-01	s	DTC144E
Q166	8-729-901-01	s	DTC144E
Q167	8-729-210-22	s	2SA1162
Q201	8-729-100-66	s	2SC1623
Q202	8-729-100-66	s	2SC1623
Q203	8-729-100-67	s	2SC1623-L7
Q204	8-729-100-67	s	2SC1623-L7
Q206	8-729-901-06	s	DTA144EK
Q207	8-729-901-01	s	DTC144EK
Q208	8-729-901-01	s	DTC144EK
Q209	8-729-901-01	s	DTC144EK
Q210	8-729-901-01	s	DTC144EK
Q211	8-729-901-01	s	DTC144EK
Q212	8-729-216-22	s	2SA1162
Q213	8-729-901-06	s	DTA144EK
Q214	8-729-901-06	s	DTA144EK
Q215	8-729-901-06	s	DTA144EK
Q216	8-729-901-06	s	DTA144EK
Q217	8-729-901-06	s	DTA144EK
Q218	8-729-901-01	s	DTC144EK
Q219	8-729-901-01	s	DTC144EK
Q220	8-729-900-53	s	DTC114EK
24)Q221	8-729-901-01	s	DTC144EK
22)Q221	8-729-901-06	s	DTA144EK
Q222	8-729-901-01	s	DTC144EK
Q223	8-729-901-01	s	DTC144EK
Q224	8-729-901-01	s	DTC144EK
Q225	8-729-901-01	s	DTC144EK
Q226	8-729-901-01	s	DTC144EK
Q227	8-729-901-01	s	DTC144EK
Q228	8-729-901-06	s	DTA144EK
Q229	8-729-901-06	s	DTA144EK
Q230	8-729-901-01	s	DTC144EK
Q231	8-729-901-06	s	DTA144EK
Q232	8-729-901-01	s	DTC144EK
Q233	8-729-901-01	s	DTC144EK
Q234	8-729-901-01	s	DTC144EK
Q701	8-729-216-22	s	2SA1162
Q711	8-729-216-22	s	2SA1162
Q712	8-729-216-22	s	2SA1162
Q713	8-729-901-01	s	DTC144EK
Q731	8-729-901-01	s	DTC144EK
Q732	8-729-901-01	s	DTC144EK

R8	1-216-699-11	s	METAL CHIP	100k	0.50%	1/10W
R9	1-216-699-11	s	METAL CHIP	100k	0.50%	1/10W
R14	1-216-699-11	s	METAL CHIP	100k	0.50%	1/10W
R15	1-216-699-11	s	METAL CHIP	100k	0.50%	1/10W
R23	1-216-656-11	s	METAL CHIP	1.6k	0.50%	1/10W
R44	1-216-748-11	s	METAL CHIP	39k	5%	1/10W
R50	1-216-093-00	s	RES, CHIP	68k	5%	1/10W
R58	1-216-093-00	s	RES, CHIP	68k	5%	1/10W
30)R126	1-216-095-00	s	RES, CHIP	82k	5%	1/10W
31)R126	1-216-688-11	s	METAL CHIP	36k	0.50%	1/10W
30)R127	1-216-087-00	s	RES, CHIP	39k	5%	1/10W
31)R127	1-216-681-11	s	METAL CHIP	18k	0.50%	1/10W
R152	1-216-748-11	s	METAL CHIP	39k	5%	1/10W
R154	1-216-748-11	s	METAL CHIP	39k	5%	1/10W
R155	1-216-748-11	s	METAL CHIP	39k	5%	1/10W

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Ref.No.	Parts No.	SP	Description
R163	1-216-065-00	s	RES, CHIP 4.7k 5% 1/10W
R164	1-216-113-00	s	RES, CHIP 470k 5% 1/10W
⚠ R172	1-216-345-11	s	METAL OXIDE 0.47 5% 1W
R189	1-216-683-11	s	METAL CHIP 27k 0.50% 1/10W
R190	1-216-675-11	s	METAL CHIP 10k 0.50% 1/10W
R191	1-216-675-11	s	METAL CHIP 10k 0.50% 1/10W
R192	1-216-685-11	s	METAL CHIP 27k 0.50% 1/10W
R217	1-216-107-00	s	RES, CHIP 270k 5% 1/10W
R221	1-216-107-00	s	RES, CHIP 270k 5% 1/10W
R254	1-216-684-11	s	METAL CHIP 24k 0.50% 1/10W
R255	1-216-681-11	s	METAL CHIP 18k 0.50% 1/10W
47) R383	1-216-093-00	s	CHIP 68k 5% 1/10W
48) R383	1-216-696-11	s	METAL CHIP 75k 0.5% 1/10W
R398	1-216-648-11	s	METAL CHIP 750 0.50% 1/10W
R399	1-216-641-11	s	METAL CHIP 390 0.50% 1/10W
R400	1-216-657-11	s	METAL CHIP 1.8k 0.50% 1/10W
R401	1-216-641-11	s	METAL CHIP 390 0.50% 1/10W
R402	1-216-033-00	s	RES, CHIP 220 5% 1/10W
R501	1-216-659-11	s	METAL CHIP 5.6k 0.50% 1/10W
R502	1-216-659-11	s	METAL CHIP 5.6k 0.50% 1/10W
R521	1-216-675-11	s	METAL CHIP 10k 0.50% 1/10W
R522	1-216-675-11	s	METAL CHIP 10k 0.50% 1/10W
R542	1-216-696-11	s	METAL CHIP 75k 0.50% 1/10W
R576	1-216-675-11	s	METAL CHIP 10k 0.50% 1/10W
R577	1-216-675-11	s	METAL CHIP 10k 0.50% 1/10W
28) R583	1-216-093-00	s	RES, CHIP 10k 5% 1/10W
29) R583	1-216-049-00	s	RES, CHIP 1k 5% 1/10W
R711	1-216-624-11	s	METAL CHIP 75 0.50% 1/10W
R731	1-216-065-00	s	RES, CHIP 4.7k 5% 1/10W
RB1	1-231-387-00	s	NETTY, RES
RV2	1-237-037-11	s	VAR, CERMET 20k
RV3	1-237-038-11	s	VAR, CERMET 50k
RV6	1-237-041-11	s	VAR, CERMET 500k
RV7	1-237-037-11	s	VAR, CERMET 20k
RV8	1-237-038-11	s	VAR, CERMET 50k
RV9	1-237-037-11	s	VAR, CERMET 20k
RV10	1-237-039-11	s	VAR, CERMET 100k
RV11	1-237-039-11	s	VAR, CERMET 100k
RV12	1-237-037-11	s	VAR, CERMET 20k
1) RV13	1-237-038-11	s	VAR, CERMET 50k
32) RV13	1-237-037-21	s	VAR, CERMET 20k
31) RV13	1-237-035-21	s	VAR, CERMET 5k
1) RV14	1-237-036-11	s	VAR, CERMET 10k
2) RV14	1-237-034-11	s	VAR, CERMET 2k
1) RV15	1-237-037-11	s	VAR, CERMET 20k
2) RV15	1-237-036-11	s	VAR, CERMET 10k
RV16	1-237-038-11	s	VAR, CERMET 50k
RV17	1-237-041-11	s	VAR, CERMET 500k
RV18	1-237-038-11	s	VAR, CERMET 50k
RV19	1-237-041-11	s	VAR, CERMET 500k
RV20	1-237-037-11	s	VAR, CERMET 20k
RV151	1-237-034-11	s	VAR, CERMET 2k
RV201	1-237-035-11	s	VAR, CERMET 5k
S1	1-570-619-11	s	DIP
TH1	1-800-198-11	s	THERMISTOR S-1K
TH2	1-800-198-11	s	THERMISTOR S-1K
X1	1-567-860-11	s	VIBRATOR, CRYSTAL
X201	1-567-861-11	s	VIBRATOR, CRYSTAL 4.194304MHz

Ref.No.	Parts No.	SP	Description
SW-131 BOARD			
	1-622-632-11	o	PRINTED CIRCUIT BOARD, SW-131
⚠ S1	1-532-525-00	s	BREAKER, CIRCUIT
SW-192 BOARD			
	35) 1-622-622-11	o	PRINTED CIRCUIT BOARD, SW-192
	36) 1-622-622-14	o	PRINTED CIRCUIT BOARD, SW-192
S1	1-571-064-11	s	MICRO
SW-200 BOARD			
	35) 1-622-620-11	o	PRINTED CIRCUIT BOARD, SW-200
	36) 1-622-620-14	o	PRINTED CIRCUIT BOARD, SW-200
S1	1-571-064-11	s	MICRO
SW-201 BOARD			
	35) 1-622-619-11	o	PRINTED CIRCUIT BOARD, SW-201
	36) 1-622-619-13	o	PRINTED CIRCUIT BOARD, SW-201
S1	1-571-064-11	s	MICRO
S2	1-571-064-11	s	MICRO
SW-223 BOARD			
	1-622-636-11	o	PRINTED CIRCUIT BOARD, SW-223
S1	1-570-608-11	s	TOGGLE
TC-39F BOARD			
	This board includes the DUS-194 board.		
	8) A-6713-298-A	o	MOUNTED CIRCUIT BOARD, TC-39F
	9) A-6713-298-B	o	MOUNTED CIRCUIT BOARD, TC-39F
C1	1-124-908-11	s	ELECT 22 20% 50V
C2	1-124-908-11	s	ELECT 22 20% 50V
C5	1-135-098-21	s	TANTAL. CHIP 47 20% 6.3V
C6	1-135-098-21	s	TANTAL. CHIP 47 20% 6.3V
C7	1-135-093-21	s	TANTAL. CHIP 10 10% 16V

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Ref.No.	Parts No.	SP	Description		
C9	1-124-584-00	s	ELECT	100	20% 10V
C10	1-124-910-11	s	ELECT	47	20% 50V
C11	1-135-093-21	s	TANTAL. CHIP	10	10% 16V
C13	1-135-093-21	s	TANTAL. CHIP	10	10% 16V
C101	1-124-261-00	s	ELECT	10	20% 50V
C102	1-124-261-00	s	ELECT	10	20% 50V
C106	1-135-101-21	s	TANTAL. CHIP	22	10% 6.3V
C108	1-124-224-00	s	ELECT	47	20% 6.3V
C109	1-135-101-21	s	TANTAL. CHIP	22	10% 6.3V
C110	1-135-093-21	s	TANTAL. CHIP	10	10% 16V
C111	1-135-098-21	s	TANTAL. CHIP	47	20% 6.3V
C112	1-135-086-21	s	TANTAL. CHIP	2.2	10% 20V
C130	1-135-093-21	s	TANTAL. CHIP	10	10% 16V
C201	1-124-261-00	s	ELECT	10	20% 50V
C202	1-124-261-00	s	ELECT	10	20% 50V
C205	1-135-101-21	s	TANTAL. CHIP	22	10% 6.3V
C208	1-124-224-00	s	ELECT	47	20% 6.3V
C209	1-135-101-21	s	TANTAL. CHIP	22	10% 6.3V
C210	1-135-093-21	s	TANTAL. CHIP	10	10% 16V
C212	1-135-088-21	s	TANTAL. CHIP	2.2	10% 20V
C230	1-135-093-21	s	TANTAL. CHIP	10	10% 16V
C301	1-124-908-11	s	ELECT	22	20% 50V
C302	1-124-908-11	s	ELECT	22	20% 50V
C305	1-135-101-21	s	TANTAL. CHIP	22	10% 6.3V
C307	1-135-101-21	s	TANTAL. CHIP	22	10% 6.3V
C308	1-135-085-21	s	TANTAL. CHIP	4.7	10% 25V
C309	1-135-088-21	s	TANTAL. CHIP	2.2	10% 20V
C311	1-135-085-21	s	TANTAL. CHIP	4.7	10% 25V
C401	1-124-908-11	s	ELECT	22	20% 50V
C402	1-124-908-11	s	ELECT	22	20% 50V
C406	1-135-101-21	s	TANTAL. CHIP	22	10% 6.3V
C407	1-135-101-21	s	TANTAL. CHIP	22	10% 6.3V
C408	1-135-085-21	s	TANTAL. CHIP	4.7	10% 25V
C409	1-135-088-21	s	TANTAL. CHIP	2.2	10% 20V
C410	1-135-085-21	s	TANTAL. CHIP	4.7	10% 25V
8)C501	1-124-247-00	s	ELECT	10	20% 25V
9)C501	1-135-076-21	s	TANTAL. CHIP	1	10% 35V
8)C502	1-124-224-00	s	ELECT	47	20% 6.3V
9)C502	1-135-091-00	s	TANTAL. CHIP	1	10% 16V
C503	1-163-033-00	s	CERAMIC CHIP	0.022	10% 25V
8)C504	1-124-584-00	s	ELECT	100	20% 10V
9)C504	1-135-098-21	s	TANTAL. CHIP	47	20% 6.3V
8)C507	1-135-099-00	s	TANTAL. CHIP	2.2	10% 6.3V
14)C507	1-135-073-00	s	TANTAL. CHIP	0.33	10% 35V
13)C507	1-135-155-21	s	TANTAL. CHIP	4.7	10% 10V
8)C508	1-124-222-00	s	ELECT	22	20% 6.3V
14)C508	1-135-073-00	s	TANTAL. CHIP	0.33	10% 35V
13)C508	1-135-155-21	s	TANTAL. CHIP	4.7	10% 10V
C509	1-135-099-00	s	TANTAL. CHIP	2.2	10% 6.3V
C510	1-135-099-00	s	TANTAL. CHIP	2.2	10% 6.3V
8)C516	1-135-098-21	s	TANTAL. CHIP	47	20% 6.3V
C517	1-135-091-00	s	TANTAL. CHIP	1	10% 16V
C519	1-135-073-00	s	TANTAL. CHIP	0.33	10% 35V
9)C520	1-135-098-21	s	TANTAL. CHIP	47	20% 6.3V
C521	1-163-081-00	s	CERAMIC CHIP	0.22	25V
C522	1-135-073-00	s	TANTAL. CHIP	0.33	10% 35V
C523	1-163-115-00	s	CERAMIC CHIP	82PF	5% 50V
8)C526	1-135-098-21	s	TANTAL. CHIP	47	20% 6.3V
8)C530	1-135-076-21	s	TANTAL. CHIP	1	10% 35V
8)C531	1-135-076-21	s	TANTAL. CHIP	1	10% 35V
9)C531	1-135-091-00	s	TANTAL. CHIP	1	10% 16V
9)C532	1-125-447-11	s	DOUBLE LAYERS	1F	10% 16V
8)C533	1-135-076-21	s	TANTAL. CHIP	1	10% 35V
9)C533	1-135-091-00	s	TANTAL. CHIP	1	10% 16V
C535	1-163-033-00	s	CERAMIC CHIP	0.022	10% 25V
C536	1-163-033-00	s	CERAMIC CHIP	0.022	10% 25V
C537	1-163-033-00	s	CERAMIC CHIP	0.022	10% 25V
C538	1-163-033-00	s	CERAMIC CHIP	0.022	10% 25V
C539	1-163-033-00	s	CERAMIC CHIP	0.022	10% 25V
C540	1-163-033-00	s	CERAMIC CHIP	0.022	10% 25V
C541	1-163-033-00	s	CERAMIC CHIP	0.022	10% 25V
C542	1-163-033-00	s	CERAMIC CHIP	0.022	10% 25V
C543	1-163-033-00	s	CERAMIC CHIP	0.022	10% 25V
C544	1-163-033-00	s	CERAMIC CHIP	0.022	10% 25V
C545	1-163-033-00	s	CERAMIC CHIP	0.022	10% 25V
C546	1-163-033-00	s	CERAMIC CHIP	0.022	10% 25V
8)C547	1-135-073-00	s	TANTAL. CHIP	0.33	10% 35V
9)C547	1-135-091-00	s	TANTAL. CHIP	1	10% 16V
14)C551	1-124-256-00	s	ELECT	1.5	20% 50V
13)C551	1-135-091-00	s	TANTAL. CHIP	1	20% 16V
9)C552	1-135-091-00	s	TANTAL. CHIP	1	10% 16V
9)C553	1-163-037-00	s	CERAMIC CHIP	0.022	10% 25V
9)C554	1-163-037-00	s	CERAMIC CHIP	0.022	10% 25V
9)C555	1-163-037-00	s	CERAMIC CHIP	0.022	10% 25V
9)C556	1-125-447-11	s	DOUBLE LAYERS	1F	10% 16V
13)C557	1-163-037-00	s	CERAMIC CHIP	0.022	10% 25V

CN1	1-564-007-00	o	8P	
	1-562-153-11	o	HOUSING, 8P	
	1-564-026-21	o	CONTACT	
CN2	1-564-004-00	o	5P	
	1-562-150-11	o	HOUSING, 5P	
	1-564-026-21	o	CONTACT	
CN3	1-564-003-00	o	4P	
	1-562-149-11	o	HOUSING, 4P	
	1-564-026-21	o	CONTACT	
CN4	1-564-007-00	o	8P	
	1-562-153-11	o	HOUSING, 8P	
	1-564-026-21	o	CONTACT	
CN5	1-564-001-11	o	2P	
	1-562-147-11	o	HOUSING, 2P	
	1-564-026-21	o	CONTACT	
CN6	1-564-001-11	o	2P	
	1-562-147-11	o	HOUSING, 2P	
	1-564-026-21	o	CONTACT	
CN7	1-564-001-11	o	2P	
	1-562-147-11	o	HOUSING, 2P	
	1-564-026-21	o	CONTACT	
CN8	1-564-001-11	o	2P	
	1-562-147-11	o	HOUSING, 2P	
	1-564-026-21	o	CONTACT	
CN9	1-564-002-00	o	3P	
	1-562-148-11	o	HOUSING, 3P	
	1-564-026-21	o	CONTACT	
CN10	1-564-012-00	o	2P	
	1-562-147-11	o	HOUSING, 2P	
	1-564-026-21	o	CONTACT	
CN11	1-564-012-00	o	2P	
	1-562-147-11	o	HOUSING, 2P	
	1-564-026-21	o	CONTACT	
CN12	1-563-863-21	o	26P	
CN13	1-563-863-21	o	26P	
CN14	1-564-001-11	o	2P	
	1-562-147-11	o	HOUSING, 2P	
	1-564-026-21	o	CONTACT	
CN15	1-564-001-11	o	2P	
	1-562-147-11	o	HOUSING, 2P	
	1-564-026-21	o	CONTACT	

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Ref.No.	Parts No.	SP	Description
CN16	1-564-001-11	o	2P
	1-562-147-11	o	HOUSING, 2P
	1-564-026-21	o	CONTACT
CN17	1-564-003-00	o	4P
	1-562-149-11	o	HOUSING, 4P
	1-564-026-21	o	CONTACT
CN101	1-564-002-00	o	3P
	1-562-148-11	o	HOUSING, 3P
	1-564-026-21	o	CONTACT
CN102	1-564-016-00	o	6P
	1-562-151-11	o	HOUSING, 6P
	1-564-026-21	o	CONTACT
CN201	1-564-002-00	o	3P
	1-562-148-11	o	HOUSING, 3P
	1-564-026-21	o	CONTACT
CN301	1-564-002-00	o	3P
	1-562-148-11	o	HOUSING, 3P
	1-564-026-21	o	CONTACT
CN302	1-564-018-11	o	8P
	1-562-153-11	o	HOUSING, 8P
	1-564-026-21	o	CONTACT
CN401	1-564-002-00	o	3P
	1-562-148-11	o	HOUSING, 3P
	1-564-026-21	o	CONTACT
D1	8-719-101-23	s	1SS123
49) D2	8-719-101-70	s	RD8.2EL1
50) D2	8-719-110-06	s	RD8.2ESB1
D3	8-719-101-23	s	1SS123
D4	8-719-100-41	s	RD6.8E-B
D5	8-719-101-23	s	1SS123
D6	8-719-812-41	s	TLUR164
D7	8-719-812-41	s	TLUR164
D8	8-719-100-03	s	1S2835
D12	8-719-812-41	s	TLUR164
49) D13	8-719-101-89	s	RD18E-L2
50) D13	8-719-110-41	s	RD15ESB-B2
D14	8-719-101-23	s	1SS123
D15	8-719-101-23	s	1SS123
D16	8-719-101-23	s	1SS123
D17	8-719-101-23	s	1SS123
D500	8-719-100-03	s	1S2835
D502	8-719-938-72	s	S3D1-05CF
D503	8-719-101-23	s	1SS123
D504	8-719-101-23	s	1SS123
D505	8-719-100-05	s	1S2837
D506	8-719-100-05	s	1S2837
D507	8-719-100-03	s	1S2835
1) D508	8-719-100-05	s	1S2837
2) D508	8-719-101-23	s	1SS123
1) D510	8-719-911-19	s	1SS119
8) D512	8-719-938-72	s	S3D1-05CF
9) D512	8-719-100-05	s	1S2837
8) D513	8-719-938-72	s	S3D1-05CF
9) D513	8-719-101-23	s	1SS123
8) D514	8-719-100-05	s	1S2837
8) D515	8-719-100-05	s	1S2837
D516	8-719-945-57	s	SLR-34YC3
D517	8-719-945-57	s	SLR-34YC3
D518	8-719-110-15	s	RD10ES-B
8) D519	8-719-100-05	s	1S2837
D520	8-719-945-57	s	SLR-34YC3
D521	8-719-945-57	s	SLR-34YC3
D523	1-808-016-11	s	LED MODULE

Ref.No.	Parts No.	SP	Description
IC1	8-759-700-84	s	NJM2041M-D(JRC)
IC2	8-759-700-84	s	NJM2041M-D(JRC)
IC3	8-759-700-84	s	NJM2041M-D(JRC)
IC6	8-759-700-84	s	NJM2041M-D(JRC)
IC7	8-759-700-84	s	NJM2041M-D(JRC)
IC9	8-759-700-84	s	NJM2041M-D(JRC)
IC11	8-759-700-84	s	NJM2041M-D(JRC)
IC12	1-807-982-11	s	BH1808
11) IC13	8-759-745-64	s	NJM4560M(JRC)
12) IC13	8-759-710-77	s	NJM4560M-D(JRC)
IC14	8-759-928-09	s	TLC27M2CPS (TI)
IC15	8-759-928-09	s	TLC27M2CPS (TI)
IC16	8-759-700-50	s	NJM386M(JRC)
30) IC101	8-759-200-84	s	TC4081BF(TOSHIBA)
31) IC101	8-759-009-19	s	MC14081BF(MOTOROLA)
30) IC102	8-759-200-83	s	TC4071BF(TOSHIBA)
31) IC102	8-759-009-12	s	MC14071BF(MOTOROLA)
30) IC103	8-759-200-84	s	TC4081BF(TOSHIBA)
31) IC103	8-759-009-19	s	MC14081BF(MOTOROLA)
IC501	8-759-944-79	s	CXD1132Q (SONY)
IC502	8-759-141-20	s	CXD1133Q-321 (SONY)
IC503	8-759-942-44	s	CXD1128Q (SONY)
8) IC504	8-759-105-33	s	uPC78L05J(NEC)
25) IC504	8-759-112-06	s	uPC78M05H(NEC)
26) IC504	8-759-171-05	s	M5F7805
27) IC504	8-759-982-05	s	RC7805FA
8) IC505	8-759-920-14	s	S-8053AJH (SEIKO I AND E)
9) IC505	8-759-980-28	s	RH5VA30CA
IC506	8-759-928-09	s	TLC27M2CPS (TI)
8) IC507	8-759-205-05	s	TC74HC32F(TOSHIBA)
38) IC507	8-759-200-68	s	TC4011BF(TOSHIBA)
31) IC507	8-759-008-79	s	MC14011BF(MOTOROLA)
11) IC508	8-759-200-81	s	TC4053BF(TOSHIBA)
37) IC508	8-759-208-11	s	TC4053BFBH(TOSHIBA)
31) IC508	8-759-300-71	s	HD14053BFP(HITACHI)
IC509	8-759-700-45	s	NJM4556M-A(JRC)
IC510	8-759-009-02	s	MC14046BF(MOTOROLA)
IC511	8-759-205-39	s	TC74HC4049F(TOSHIBA)
30) IC512	8-759-200-82	s	TC4069UBF(TOSHIBA)
31) IC512	8-759-009-10	s	MC14069UBF(MOTOROLA)
8) IC513	8-759-208-63	s	TC74HC393F(TOSHIBA)
39) IC513	8-759-208-05	s	TC4520BFNB(TOSHIBA)
31) IC513	8-759-009-41	s	MC14520BF(MOTOROLA)
30) IC514	8-759-200-90	s	TC4538BF(TOSHIBA)
31) IC514	8-759-009-51	s	MC14538BF(MOTOROLA)
IC515	8-759-205-78	s	TC504013BF(TOSHIBA)
IC516	8-759-012-84	s	MC14557BF(MOTOROLA)
IC517	8-759-239-58	s	TC74HC221AF(TOSHIBA)
8) IC518	8-759-209-90	s	TC4871F(TOSHIBA)
39) IC518	8-759-200-84	s	TC4081BF(TOSHIBA)
31) IC518	8-759-009-19	s	MC14081BF(MOTOROLA)
8) IC519	8-759-209-90	s	TC4871F(TOSHIBA)
39) IC519	8-759-200-83	s	TC4071BF(TOSHIBA)
31) IC519	8-759-009-12	s	MC14071BF(MOTOROLA)
8) IC520	8-759-209-97	s	TC4S81F(TOSHIBA)
39) IC520	8-759-200-83	s	TC4071BF(TOSHIBA)
31) IC520	8-759-009-12	s	MC14071BF(MOTOROLA)
10) IC521	8-759-209-90	s	TC4871F(TOSHIBA)
9) IC521	8-759-209-54	s	TC4801F(TOSHIBA)
9) IC522	8-759-209-54	s	TC4801F(TOSHIBA)
9) IC523	8-759-939-42	s	S-81230AG-RB-T1(SEIKO)
39) IC524	8-759-200-90	s	TC4538BF(TOSHIBA)
31) IC524	8-759-009-51	s	MC14538BF(MOTOROLA)

Parts that are not listed in the "reference numbers order list" are shown in the "General Purpose Electrical Parts List".

Ref.No.	Parts No.	SP	Descriptn
L101	1-410-704-21	s	CHIP 8.2
L102	1-410-704-21	s	CHIP 8.2
L201	1-410-704-21	s	CHIP 8.2
L202	1-410-704-21	s	CHIP 8.2
L301	1-410-704-21	s	CHIP 8.2
L302	1-410-704-21	s	CHIP 8.2
LA01	1-410-704-21	s	CHIP 8.2
LA02	1-410-704-21	s	CHIP 8.2
LCD501	1-807-981-11	s	DISPLAY PANEL, LIQUID CRYSTAL
PH1	1-806-876-11	s	PHOTO COUPLER MCD-5218L
Q1	8-729-901-01	s	DTC144EK
Q2	8-729-901-01	s	DTC144EK
Q3	8-729-100-66	s	2SC1623
Q4	8-729-100-66	s	2SC1623
Q5	8-729-100-66	s	2SC1623
Q6	8-729-100-66	s	2SC1623
Q7	8-729-100-66	s	2SC1623
Q8	8-729-100-66	s	2SC1623
Q9	8-729-901-01	s	DTC144EK
Q10	8-729-901-01	s	DTC144EK
Q11	8-729-216-22	s	2SA1162
Q12	8-729-100-66	s	2SC1623
Q13	8-729-216-22	s	2SA1162
Q14	8-729-400-76	s	2SB1030
Q15	8-729-901-01	s	DTC144EK
Q16	8-729-100-66	s	2SC1623
Q17	8-729-901-01	s	DTC144EK
Q18	8-729-901-01	s	DTC144EK
Q501	8-729-901-03	s	DTC144WK
Q502	8-729-100-66	s	2SC1623
Q503	8-729-901-01	s	DTC144EK
9)Q504	8-729-106-64	s	2SD1615-GL
1)Q505	8-729-901-01	s	DTC144EK
Q506	8-729-271-22	s	2SC2712-G
Q507	8-729-271-22	s	2SC2712-G
Q508	8-729-901-06	s	DTA144EK
8)Q509	8-729-901-01	s	DTC144EK
14)Q509	8-729-271-22	s	2SC2712-G
13)Q509	8-729-216-21	s	2SC1162Y
8)Q510	8-729-901-01	s	DTC144EK
13)Q510	8-729-901-21	s	DTC144EK
R6	1-216-635-11	s	METAL CHIP 220 0.50% 1/10W
R7	1-216-635-11	s	METAL CHIP 220 0.50% 1/10W
R8	1-216-667-11	s	METAL CHIP 4.7k 0.50% 1/10W
R9	1-216-667-11	s	METAL CHIP 4.7k 0.50% 1/10W
R28	1-216-625-11	s	METAL CHIP 82 0.50% 1/10W
R29	1-247-711-11	s	CARBON 680 5% 1/4W
1)R101	1-216-671-11	s	METAL CHIP 6.8k 0.50% 1/10W
1)R102	1-216-671-11	s	METAL CHIP 6.8k 0.50% 1/10W
R103	1-216-627-11	s	METAL CHIP 100 0.50% 1/10W
R109	1-216-635-11	s	METAL CHIP 220 0.50% 1/10W
R110	1-216-675-11	s	METAL CHIP 10k 0.50% 1/10W
R111	1-216-667-11	s	METAL CHIP 4.7k 0.50% 1/10W
R112	1-216-667-11	s	METAL CHIP 4.7k 0.50% 1/10W
R113	1-216-667-11	s	METAL CHIP 4.7k 0.50% 1/10W
R114	1-216-666-11	s	METAL CHIP 4.3k 0.50% 1/10W
R115	1-216-667-11	s	METAL CHIP 4.7k 0.50% 1/10W

Ref.No.	Parts No.	SP	Description
R116	1-216-667-11	s	METAL CHIP 4.7k 0.50% 1/10W
R136	1-216-627-11	s	METAL CHIP 100 0.50% 1/10W
R141	1-247-791-00	s	CARBON 22 5% 1/6W
R201	1-216-671-11	s	METAL CHIP 6.8k 0.50% 1/10W
R202	1-216-671-11	s	METAL CHIP 6.8k 0.50% 1/10W
R203	1-216-634-11	s	METAL CHIP 200 0.50% 1/10W
R209	1-216-635-11	s	METAL CHIP 220 0.50% 1/10W
R210	1-216-675-11	s	METAL CHIP 10k 0.50% 1/10W
R211	1-216-667-11	s	METAL CHIP 4.7k 0.50% 1/10W
R212	1-216-667-11	s	METAL CHIP 4.7k 0.50% 1/10W
R213	1-216-667-11	s	METAL CHIP 4.7k 0.50% 1/10W
R214	1-216-666-11	s	METAL CHIP 4.3k 0.50% 1/10W
R215	1-216-667-11	s	METAL CHIP 4.7k 0.50% 1/10W
R216	1-216-667-11	s	METAL CHIP 4.7k 0.50% 1/10W
R301	1-216-671-11	s	METAL CHIP 6.8k 0.50% 1/10W
R302	1-216-671-11	s	METAL CHIP 6.8k 0.50% 1/10W
R303	1-216-634-11	s	METAL CHIP 200 0.50% 1/10W
R309	1-216-635-11	s	METAL CHIP 220 0.50% 1/10W
R310	1-216-675-11	s	METAL CHIP 10k 0.50% 1/10W
R311	1-216-667-11	s	METAL CHIP 4.7k 0.50% 1/10W
R312	1-216-667-11	s	METAL CHIP 4.7k 0.50% 1/10W
R313	1-216-667-11	s	METAL CHIP 4.7k 0.50% 1/10W
R314	1-216-666-11	s	METAL CHIP 4.3k 0.50% 1/10W
R315	1-216-667-11	s	METAL CHIP 4.7k 0.50% 1/10W
R316	1-216-667-11	s	METAL CHIP 4.7k 0.50% 1/10W
R401	1-216-671-11	s	METAL CHIP 6.8k 0.50% 1/10W
R402	1-216-671-11	s	METAL CHIP 6.8k 0.50% 1/10W
R403	1-216-634-11	s	METAL CHIP 200 0.50% 1/10W
R409	1-216-635-11	s	METAL CHIP 220 0.50% 1/10W
R410	1-216-675-11	s	METAL CHIP 10k 0.50% 1/10W
R411	1-216-667-11	s	METAL CHIP 4.7k 0.50% 1/10W
R412	1-216-667-11	s	METAL CHIP 4.7k 0.50% 1/10W
R413	1-216-667-11	s	METAL CHIP 4.7k 0.50% 1/10W
R414	1-216-666-11	s	METAL CHIP 4.3k 0.50% 1/10W
R415	1-216-667-11	s	METAL CHIP 4.7k 0.50% 1/10W
R416	1-216-667-11	s	METAL CHIP 4.7k 0.50% 1/10W
9)R501	1-249-451-11	s	CARBON 2.2 5% 1/4W
14)R502	1-247-688-11	s	CARBON 10 5% 1/4W
R506	1-216-022-00	s	METAL CHIP 75 5% 1/10W
43)R571	1-216-061-00	s	METAL CHIP 3.3k 5% 1/10W
44)R571	1-216-046-00	s	CHIP 750 5% 1/10W
1)R625	1-249-429-11	s	CARBON 10k 5% 1/16W
1)R626	1-247-895-00	s	CARBON 470k 5% 1/4W
2)R626	1-216-113-00	s	METAL CHIP 470k 5% 1/10W
RV1	1-230-337-11	s	VAR, CARBON 10k
RV2	1-237-038-11	s	VAR, CERMET 50k
RV101	1-237-032-11	s	VAR, CERMET 500
RV102	1-237-036-11	s	VAR, CERMET 10k
RV201	1-237-032-11	s	VAR, CERMET 500
RV202	1-237-036-11	s	VAR, CERMET 10k
RV301	1-237-032-11	s	VAR, CERMET 500
RV302	1-237-038-11	s	VAR, CERMET 50k
RV401	1-237-032-11	s	VAR, CERMET 500
RV402	1-237-038-11	s	VAR, CERMET 50k
S1	1-570-376-11	s	SLIDE
S2	1-570-376-11	s	SLIDE
S3	1-571-087-11	s	SLIDE
S4	1-571-087-11	s	SLIDE
S5	1-571-087-11	s	SLIDE
S6	1-571-087-11	s	SLIDE
S7	1-570-839-11	s	SLIDE
S8	1-570-376-11	s	SLIDE
S9	1-570-857-11	s	SLIDE
S10	1-570-832-11	s	SLIDE

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Ref.No.	Parts No.	SP	Description
S11	1-554-303-21	s	KEY BOARD
S13	1-554-303-21	s	KEY BOARD
S14	1-570-376-11	s	SLIDE
S15	1-570-857-11	s	SLIDE
S501	1-570-832-11	s	SLIDE
S502	1-570-832-11	s	SLIDE
S505	1-570-832-11	s	SLIDE
S506	1-570-839-11	s	SLIDE
S507	1-554-303-21	s	KEY BOARD
S508	1-554-303-21	s	KEY BOARD
S509	1-554-303-21	s	KEY BOARD
S510	1-554-303-21	s	KEY BOARD
S511	1-570-273-11	s	ROTARY (HEXADECIMAL)
S512	1-570-273-11	s	ROTARY (HEXADECIMAL)
TH1	1-800-195-00	s	TH DIRECT-HEATING DISK
TM1	1-548-119-21	s	CLOCK
X501	1-567-867-11	s	VIBRATOR, CRYSTAL
X502	1-567-812-11	s	VIBRATOR, CERAMIC 12.288MHz
X503	1-578-741-11	s	OSCILLATOR, CRYSTAL

VA-52P BOARD

This board includes the BUS-194 board.

A-6711-851-A o MOUNTED CIRCUIT BOARD, VA-52P

C3	1-124-584-00	s	ELECT	100	20% 10V
C7	1-163-111-00	s	CERAMIC CHIP	56PF	5% 50V
C8	1-135-100-21	s	TANTAL. CHIP	6.8	10% 6.3V
C10	1-135-100-21	s	TANTAL. CHIP	6.8	10% 6.3V
C11	1-135-100-21	s	TANTAL. CHIP	6.8	10% 6.3V
C12	1-163-094-00	s	CERAMIC CHIP	11P	5% 50V
C16	1-163-104-00	s	CERAMIC CHIP	30P	5% 50V
2)C20	1-163-103-00	s	CERAMIC CHIP	27	5% 50V
C64	1-162-638-11	s	CERAMIC CHIP	1	16V
C67	1-162-638-11	s	CERAMIC CHIP	1	16V
C103	1-124-225-00	s	ELECT	100	20% 6.3V
C110	1-135-100-21	s	TANTAL. CHIP	6.8	10% 6.3V
C111	1-135-100-21	s	TANTAL. CHIP	6.8	10% 6.3V
C112	1-163-094-00	s	CERAMIC CHIP	11P	5% 50V
C116	1-163-103-00	s	CERAMIC CHIP	27	5% 50V
C154	1-135-100-21	s	TANTAL. CHIP	6.8	10% 6.3V
C164	1-162-638-11	s	CERAMIC CHIP	1	16V
C167	1-162-638-11	s	CERAMIC CHIP	1	16V
C201	1-135-091-00	s	TANTAL. CHIP	1	10% 16V
C202	1-135-098-21	s	TANTAL. CHIP	47	20% 6.3V
C204	1-135-091-00	s	TANTAL. CHIP	1	10% 16V
C205	1-135-091-00	s	TANTAL. CHIP	1	10% 16V
C211	1-135-091-00	s	TANTAL. CHIP	1	10% 16V
C212	1-135-091-00	s	TANTAL. CHIP	1	10% 16V
C232	1-107-077-00	s	MICA	47P	5% 50V
24)C234	1-163-123-00	s	CERAMIC CHIP	180P	5% 50V
22)C234	1-163-126-00	s	CERAMIC CHIP	240P	5% 50V
C235	1-163-123-00	s	CERAMIC CHIP	180P	5% 50V
C241	1-135-098-21	s	TANTAL. CHIP	47	20% 6.3V
C242	1-135-098-21	s	TANTAL. CHIP	47	20% 6.3V
C243	1-135-098-21	s	TANTAL. CHIP	47	20% 6.3V
C244	1-135-098-21	s	TANTAL. CHIP	47	20% 6.3V
C245	1-135-098-21	s	TANTAL. CHIP	47	20% 6.3V
C249	1-135-101-21	s	TANTAL. CHIP	22	10% 6.3V
C302	1-124-584-00	s	ELECT	100	20% 10V
C304	1-124-584-00	s	ELECT	100	20% 10V
C322	1-135-097-21	s	TANTAL. CHIP	15	10% 10V
C323	1-135-097-21	s	TANTAL. CHIP	15	10% 10V
C325	1-135-098-21	s	TANTAL. CHIP	47	20% 6.3V
C401	1-124-119-00	s	ELECT	330	20% 16V
C402	1-124-604-00	s	ELECT	330	20% 10V
C403	1-124-584-00	s	ELECT	100	20% 10V
C502	1-135-070-00	s	TANTAL. CHIP	0.1	10% 35V
C503	1-135-070-00	s	TANTAL. CHIP	0.1	10% 35V
24)C506	1-163-033-00	s	CERAMIC CHIP	0.022	10% 25V
22)C506	1-164-161-11	s	CERAMIC CHIP	2200PF	10% 100V
C601	1-135-093-21	s	TANTAL. CHIP	10	10% 16V
C602	1-135-093-21	s	TANTAL. CHIP	10	10% 16V
C603	1-135-098-21	s	TANTAL. CHIP	47	20% 6.3V
C604	1-135-098-21	s	TANTAL. CHIP	47	20% 6.3V
C631	1-135-093-21	s	TANTAL. CHIP	10	10% 16V
C632	1-135-093-21	s	TANTAL. CHIP	10	10% 16V
C635	1-135-093-21	s	TANTAL. CHIP	10	10% 16V
C636	1-135-093-21	s	TANTAL. CHIP	10	10% 16V
C645	1-135-070-00	s	TANTAL. CHIP	0.1	10% 35V
C646	1-135-070-00	s	TANTAL. CHIP	0.1	10% 35V
C653	1-135-093-21	s	TANTAL. CHIP	10	10% 16V
C654	1-135-093-21	s	TANTAL. CHIP	10	10% 16V
C655	1-124-236-00	s	ELECT	47	20% 16V
C656	1-124-236-00	s	ELECT	47	20% 16V
C657	1-135-093-21	s	TANTAL. CHIP	10	10% 16V
C658	1-135-093-21	s	TANTAL. CHIP	10	10% 16V
C663	1-135-093-21	s	TANTAL. CHIP	10	10% 16V
C664	1-135-093-21	s	TANTAL. CHIP	10	10% 16V
C667	1-124-236-00	s	ELECT	47	20% 16V
C668	1-124-236-00	s	ELECT	47	20% 16V
C671	1-163-127-00	s	CERAMIC CHIP	270PF	5% 50V
C672	1-163-127-00	s	CERAMIC CHIP	270PF	5% 50V
C684	1-161-485-00	s	CERAMIC	0.1	10% 50V
C685	1-161-485-00	s	CERAMIC	0.1	10% 50V
C689	1-135-093-21	s	TANTAL. CHIP	10	10% 16V
C690	1-135-093-21	s	TANTAL. CHIP	10	10% 16V
C691	1-124-236-00	s	ELECT	47	20% 16V
C692	1-124-584-00	s	ELECT	100	20% 10V
C693	1-124-584-00	s	ELECT	100	20% 10V
C694	1-135-093-21	s	TANTAL. CHIP	10	10% 16V
C695	1-135-093-21	s	TANTAL. CHIP	10	10% 16V
C696	1-124-234-00	s	ELECT	22	20% 16V
C697	1-124-234-00	s	ELECT	22	20% 16V
C703	1-135-093-21	s	TANTAL. CHIP	10	10% 16V
C704	1-135-093-21	s	TANTAL. CHIP	10	10% 16V
C717	1-135-093-21	s	TANTAL. CHIP	10	10% 16V
C718	1-135-093-21	s	TANTAL. CHIP	10	10% 16V
C721	1-135-093-21	s	TANTAL. CHIP	10	10% 16V
C722	1-135-078-21	s	TANTAL. CHIP	2.2	10% 35V
C723	1-135-093-21	s	TANTAL. CHIP	10	10% 16V
C724	1-135-078-21	s	TANTAL. CHIP	2.2	10% 35V
C725	1-135-078-21	s	TANTAL. CHIP	2.2	10% 35V
C726	1-135-078-21	s	TANTAL. CHIP	2.2	10% 35V
C727	1-135-078-21	s	TANTAL. CHIP	2.2	10% 35V
C728	1-124-236-00	s	ELECT	47	20% 16V
13)C729	1-135-098-21	s	TANTAL. CHIP	47	20% 6.3V

CN1	1-563-310-11	s	24P
CN2	1-563-861-21	o	6P
CN3	1-564-006-11	o	7P
	1-562-152-11	o	HOUSING, 7P
	1-564-026-21	o	CONTACT
CN4	1-564-003-00	o	6P
	1-562-151-11	o	HOUSING, 6P
	1-564-026-21	o	CONTACT
CN5	1-564-003-00	o	4P
	1-562-149-11	o	HOUSING, 4P
	1-564-026-21	o	CONTACT

Parts that are not listed in the "reference numbers order list" are shown in the "General Purpose Electrical Parts List".

Ref.No.	Parts No.	SP	Description
CN6	1-564-001-11	o	2P
	1-562-147-11	o	HOUSING2P
	1-564-026-21	o	CONTACT
CN7	1-506-468-11	o	3P
	1-562-148-11	o	HOUSING3P
	1-564-681-11	o	CONTACT
CN8	1-506-471-11	o	6P
	1-562-151-11	o	HOUSING6P
	1-563-088-11	o	CONTACT
CN9	1-506-471-11	o	6P
	1-562-151-11	o	HOUSING6P
	1-563-088-11	o	CONTACT
CN10	1-506-471-11	o	6P
	1-562-151-11	o	HOUSING6P
	1-563-088-11	o	CONTACT
CN11	1-506-471-41	o	6P
	1-562-151-11	o	HOUSING, 6P
	1-563-088-11	o	CONTACT
CN12	1-564-002-00	o	3P
	1-562-148-11	o	HOUSING, 3P
	1-564-026-21	o	CONTACT
CN13	1-564-003-00	o	4P
	1-562-149-11	o	HOUSING, 4P
	1-564-026-21	o	CONTACT
CN14	1-564-003-00	o	4P
	1-562-149-11	o	HOUSING, 4P
	1-564-026-21	o	CONTACT
CN15	1-564-007-00	o	8P
	1-562-153-11	o	HOUSING, 8P
	1-564-026-21	o	CONTACT
CN16	1-564-018-11	o	8P
	1-562-153-11	o	HOUSING, 8P
	1-564-026-11	o	CONTACT
CN17	1-564-018-11	o	8P
	1-562-153-11	o	HOUSING, 8P
	1-564-026-11	o	CONTACT
CN18	1-564-001-11	o	2P
	1-562-147-11	o	HOUSING, 2P
	1-564-026-11	o	CONTACT
CN19	1-564-003-00	o	4P
	1-562-149-11	o	HOUSING, 4P
	1-564-026-11	o	CONTACT
CN20	1-564-947-21	o	2P
	1-562-579-21	s	HOUSING, 2P
CN21	1-564-947-21	o	2P
	1-562-579-21	s	HOUSING, 2P
D1	8-719-100-05	s	1SZ837
D202	8-719-101-23	s	1SS123
D301	8-719-100-05	s	1SZ837
D302	8-719-100-05	s	1SZ837
D401	8-719-100-03	s	1SZ835
D402	8-719-101-23	s	1SS123
D601	8-719-101-23	s	1SS123
D602	8-719-101-23	s	1SS123
D603	8-719-100-03	s	1SZ835
D604	8-719-100-05	s	1SZ837
D605	8-719-100-05	s	1SZ837
D606	8-719-100-05	s	1SZ837
D607	8-719-100-05	s	1SZ837
D608	8-719-100-41	s	RD5.6E-B
D609	8-719-101-23	s	1SS123
D610	8-719-101-23	s	1SS123
D620	8-719-100-05	s	1SZ837
D621	8-719-100-05	s	1SZ837

Ref.No.	Parts No.	SP	Description
FB4	1-543-309-12	s	BEAD, FERRITE
FB11	1-543-309-12	s	BEAD, FERRITE
FB104	1-543-309-12	s	BEAD, FERRITE
FB111	1-543-309-12	s	BEAD, FERRITE
FB208	1-543-309-12	s	BEAD, FERRITE
FB209	1-543-309-12	s	BEAD, FERRITE
FB210	1-543-309-12	s	BEAD, FERRITE
FL4	1-236-019-11	s	LOW PASS (CHIP)
FL5	1-236-067-12	s	C,R
FL104	1-236-021-11	s	LOW PASS (CHIP)
FL105	1-236-068-12	s	C,R
FL202	1-233-521-11	s	LOW PASS (LPF-A)
FL203	1-233-521-11	s	LOW PASS (LPF-A)
FL204	1-235-522-11	s	LOW PASS (LPF-B)
FL601	1-236-003-11	s	LOW PASS
FL602	1-236-016-11	s	LOW PASS
FL603	1-236-014-11	s	BAND PASS
FL604	1-236-015-11	s	BAND PASS
FL605	1-236-017-11	s	LOW PASS (DOLBY)
FL606	1-236-017-11	s	LOW PASS (DOLBY)
FL607	1-421-865-11	s	SKEWING
FL608	1-421-865-11	s	SKEWING
IC1	8-752-030-81	s	CXA1040M (SONY)
IC2	8-752-030-80	s	CXA1039M (SONY)
IC3	8-752-030-82	s	CXA1041M (SONY)
24)IC4	1-807-991-11	s	BH1806
22)IC4	1-807-911-21	s	BH1806A
24)IC5	1-807-991-11	s	BH1806
22)IC5	1-807-911-21	s	BH1806A
IC101	8-752-030-81	s	CXA1040M (SONY)
IC102	8-752-030-80	s	CXA1039M (SONY)
IC103	8-752-030-82	s	CXA1041M (SONY)
24)IC104	1-807-991-11	s	BH1806
22)IC104	1-807-911-21	s	BH1806A
24)IC105	1-807-991-11	s	BH1806
22)IC105	1-807-911-21	s	BH1806A
IC201	1-807-989-11	s	BH1804
30)IC202	8-759-201-00	s	TC4052BF(TOSHIBA)
31)IC202	8-759-009-06	s	MC14052BF(MOTOROLA)
IC203	1-807-988-12	s	BH1803
IC204	8-759-907-81	s	SN74LS221NS
IC205	8-759-907-81	s	SN74LS221NS
IC207	8-759-201-60	s	TC40H002F(TOSHIBA)
IC208	8-759-239-58	s	TC74HC221AF(TOSHIBA)
IC209	8-759-204-94	s	TC74HC00F(TOSHIBA)
IC210	8-759-204-94	s	TC74HC00F(TOSHIBA)
IC211	8-759-925-74	s	SM74HC04ANS(TI)
IC212	8-759-239-58	s	TC74HC221AF(TOSHIBA)
30)IC301	8-759-201-00	s	TC4052BF(TOSHIBA)
31)IC301	8-759-009-06	s	MC14052BF(MOTOROLA)
30)IC302	8-759-201-00	s	TC4052BF(TOSHIBA)
31)IC302	8-759-009-06	s	MC14052BF(MOTOROLA)
IC303	8-759-205-78	s	TC5040138F(TOSHIBA)
IC304	1-807-990-12	s	BH1805
11)IC305	8-759-200-81	s	TC40533F(TOSHIBA)
37)IC305	8-759-208-11	s	TC40533FES(TOSHIBA)
31)IC305	8-759-300-71	s	HD14053BFP(HITACHI)
IC306	1-807-992-11	s	BH1807
IC401	8-759-708-05	s	NJM78L05A(JRC)
30)IC501	8-759-200-90	s	TC4538BF(TOSHIBA)
31)IC501	8-759-009-51	s	MC14538BF(MOTOROLA)
30)IC502	8-754-200-67	s	TC40018F(TOSHIBA)

Parts that are not listed in the "reference numbers order list" are shown in the "General Purpose Electrical Parts List".

Ref.No.	Parts No.	SP	Description
31)IC502	8-759-008-74	s	MC14001BF(MOTOROLA)
22)IC503	8-759-209-90	s	TC87IF
22)IC504	8-759-209-90	s	TC87IF
11)IC601	8-759-200-81	s	TC4053BF(TOSHIBA)
37)IC601	8-759-208-11	s	TC4053BFNB(TOSHIBA)
31)IC601	8-759-300-71	s	HD14053BFP(HITACHI)
IC602	1-807-994-11	s	RH1417
IC603	8-759-403-92	s	AN6391NS (MATSUSHIYA)
IC604	8-759-403-92	s	AN6391NS (MATSUSHIYA)
IC605	8-759-700-84	s	NJM2041M-D
1)IC606	8-830-540-01	s	BR2402
16)IC606	8-830-579-01	s	BH2405
13)IC606	8-830-579-11	s	BH2405
IC607	1-807-993-11	s	RH1899
30)IC608	8-759-200-67	s	TC4001BF(TOSHIBA)
31)IC608	8-759-008-74	s	MC14001BF(MOTOROLA)
IC609	8-759-708-05	s	NJM78L05A(JRC)
L1	1-410-721-21	s	CHIP 220
L3	1-410-713-21	s	CHIP 47
L4	1-410-707-21	s	CHIP 15
L101	1-410-717-21	s	CHIP 100
L103	1-410-713-21	s	CHIP 47
1)L202	1-408-420-00	s	MICRO 82
2)L202	1-412-077-11	s	CHIP 82
L201	1-410-713-21	s	CHIP 47
L302	1-410-717-21	s	CHIP 100
L303	1-410-717-21	s	CHIP 100
L307	1-410-707-21	s	CHIP 15
L308	1-410-722-21	s	CHIP 270
1)L309	1-408-413-00	s	MICRO 22
21)L309	1-410-709-21	s	CHIP 22
L401	1-459-155-00	s	WITH CORE 45
L402	1-459-155-00	s	WITH CORE 45
L403	1-459-155-00	s	WITH CORE 45
2)L550	1-410-705-31	s	CHIP 10
L601	1-410-725-21	s	CHIP 470
L602	1-410-725-21	s	CHIP 470
L603	1-410-064-11	s	MICRO 2.7mH
L604	1-410-064-11	s	MICRO 2.7mH
L607	1-410-717-21	s	CHIP 100
L608	1-410-717-21	s	CHIP 100
Q1	8-729-271-22	s	2SC2712-G
Q3	8-729-271-22	s	2SC2712-G
Q4	8-729-202-38	s	2SC3326N
Q5	8-729-122-63	s	2SA1226
Q6	8-729-122-63	s	2SA1226
Q7	8-729-122-63	s	2SA1226
Q8	8-729-202-38	s	2SC3326N
Q10	8-729-271-22	s	2SC2712-G
Q11	8-729-102-06	s	2SC2223
Q12	8-729-102-06	s	2SC2223
Q13	8-729-216-22	s	2SA1162
17)Q14	8-729-102-06	s	2SC2223
13)Q14	8-729-205-04	s	2SC2714O-TE85R
Q21	8-729-271-22	s	2SC2712-G
Q22	8-729-122-63	s	2SA1226

Ref.No.	Parts No.	SP	Description
Q23	8-729-122-63	s	2SA1226
Q24	8-729-202-38	s	2SC3326N
Q25	8-729-202-38	s	2SC3326N
Q26	8-729-271-22	s	2SC2712-G
Q27	8-729-122-63	s	2SA1226
Q28	8-729-122-63	s	2SA1226
Q29	8-729-202-38	s	2SC3326N
Q30	8-729-202-38	s	2SC3326N
Q31	8-729-109-44	s	2SK94
Q32	8-729-271-22	s	2SC2712-G

Parts that are not listed in the "reference numbers order list" are shown in the "General Purpose Electrical Parts List".

Ref.No.	Parts No.	SP	Description
RV103	1-228-456-00	s	VAR, CERMET 1k
RV104	1-228-459-00	s	VAR, CERMET 10k
RV105	1-228-460-00	s	VAR, CERMET 20k
RV106	1-228-461-00	s	VAR, CERMET 50k
RV107	1-228-465-00	s	VAR, CERMET 1M
RV108	1-237-037-11	s	VAR, CERMET 20k
RV109	1-237-040-11	s	VAR, CERMET 200k
RV110	1-228-454-00	s	VAR, CERMET 100
RV111	1-237-032-11	s	VAR, CERMET 500
RV112	1-237-034-11	s	VAR, CERMET 2k
RV113	1-237-033-11	s	VAR, CERMET 1k
RV114	1-237-033-11	s	VAR, CERMET 1k
RV115	1-237-033-11	s	VAR, CERMET 1k
RV116	1-237-033-11	s	VAR, CERMET 1k
RV117	1-228-456-00	s	VAR, CERMET 1k
RV118	1-228-456-00	s	VAR, CERMET 1k
RV119	1-228-456-00	s	VAR, CERMET 1k
RV120	1-228-456-00	s	VAR, CERMET 1k
RV121	1-237-030-11	s	VAR, CERMET 100
RV122	1-237-030-11	s	VAR, CERMET 100
1)RV124	1-237-034-11	s	VAR, CERMET 2k
2)RV124	1-237-032-11	s	VAR, CERMET 500
RV201	1-237-034-11	s	VAR, CERMET 2k
RV202	1-237-034-11	s	VAR, CERMET 2k
RV203	1-237-033-11	s	VAR, CERMET 1k
RV204	1-237-033-11	s	VAR, CERMET 1k
RV205	1-237-034-11	s	VAR, CERMET 2k
RV206	1-237-034-11	s	VAR, CERMET 2k
RV207	1-237-033-11	s	VAR, CERMET 1k
RV208	1-237-033-11	s	VAR, CERMET 1k
11)RV209	1-237-034-11	s	VAR, CERMET 2k
12)RV209	1-237-035-11	s	VAR, CERMET 5k
RV210	1-237-035-11	s	VAR, CERMET 5k
RV211	1-237-038-11	s	VAR, CERMET 50k
RV212	1-237-036-11	s	VAR, CERMET 10k
RV213	1-237-036-11	s	VAR, CERMET 10k
RV214	1-237-035-11	s	VAR, CERMET 5k
RV215	1-237-034-11	s	VAR, CERMET 2k
RV216	1-237-037-11	s	VAR, CERMET 20k
RV217	1-237-036-11	s	VAR, CERMET 10k
RV218	1-237-035-11	s	VAR, CERMET 5k
RV219	1-237-035-11	s	VAR, CERMET 5k
RV220	1-237-034-11	s	VAR, CERMET 2k
RV221	1-237-035-11	s	VAR, CERMET 5k
RV305	1-228-456-00	s	VAR, CERMET 1k
RV306	1-228-456-00	s	VAR, CERMET 1k
RV307	1-228-456-00	s	VAR, CERMET 1k
RV308	1-228-456-00	s	VAR, CERMET 1k
RV601	1-237-035-11	s	VAR, CERMET 5k
RV602	1-237-035-11	s	VAR, CERMET 5k
RV603	1-237-037-11	s	VAR, CERMET 20k
RV604	1-237-037-11	s	VAR, CERMET 20k
RV605	1-228-457-00	s	VAR, CERMET 2k
RV606	1-228-457-00	s	VAR, CERMET 2k
RV608	1-237-034-11	s	VAR, CERMET 2k
RV609	1-228-458-00	s	VAR, CERMET 5k
RV610	1-237-034-11	s	VAR, CERMET 2k
RV611	1-237-034-11	s	VAR, CERMET 2k
RV612	1-237-036-11	s	VAR, CERMET 10k
RV613	1-237-036-11	s	VAR, CERMET 10k
RV614	1-237-036-11	s	VAR, CERMET 10k

Ref.No.	Parts No.	SP	Description
RV615	1-237-039-11	s	VAR, CERMET 100k
RV616	1-237-037-11	s	VAR, CERMET 20k
1)RV617	1-237-035-11	s	VAR, CERMET 5k
RV618	1-237-036-11	s	VAR, CERMET 10k
RV619	1-237-036-11	s	VAR, CERMET 10k
RV620	1-237-031-11	s	VAR, CERMET 200
RV621	1-237-031-11	s	VAR, CERMET 200
S601	1-570-857-11	s	SLIDE
T1	1-427-545-11	s	RF OUTPUT
T2	1-427-545-11	s	RF OUTPUT
T101	1-427-545-11	s	RF OUTPUT
T102	1-427-545-11	s	RF OUTPUT
X1	1-567-877-11	s	OSCILLATOR, CRYSTAL

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Ref.No.	Parts No.	SP	Description
FRAME			
	1-464-822-11	s	CONVERTER, DC-DC
	1-543-316-21	s	HEAD, SENSING (SMALL TYPE) "TAPE BEGINNING SENSOR"
	1-543-316-21	s	HEAD, SENSING (SMALL TYPE) "TAPE END SENSOR"
C1	1-161-051-00	s	CERAMIC 0.01 10% 25V
C2	1-161-051-00	s	CERAMIC 0.01 10% 25V
C3	1-161-051-00	s	CERAMIC 0.01 10% 25V
C4	1-161-051-00	s	CERAMIC 0.01 10% 25V
CN9001	1-562-083-00	s	50P "50P CONNECTOR"
	1-562-084-11	s	CONTACT
	1-562-084-21	s	CONTACT
CN9002	1-560-999-41	s	RECEPTACLE, XLR, 4P "EXT DC IN"
CN9003	1-566-639-11	o	4P, FEMALE "VR-5R CONNECTOR"
CN9004	1-561-781-11	s	RECEPTACLE, BNC "EXT TIME CODE IN"
CN9005	1-561-781-11	s	RECEPTACLE, BNC "GEN LOCK VIDEO IN"
CN9006	1-561-781-11	s	RECEPTACLE, BNC "EXT TIME CODE OUT"
CN9007	1-561-781-11	s	RECEPTACLE, BNC "ENCODE VIDEO OUT"
CN9008-CN9011			
	1-566-616-11	s	RECEPTACLE, XLR, 3P FEMALE (4GANG) (FOR DC)
	1-566-617-11	s	RECEPTACLE, XLR, 3P MALE (4GANG) (FOR J) "AUDIO IN CH-1" (CN9008) "AUDIO IN CH-2" (CN9009) "AUDIO IN CH-3" (CN9010) "AUDIO IN CH-4" (CN9011)
CN9015	1-563-971-11	s	20P "FB ADAPTOR"
	1-563-970-11	o	TERMINAL, SOLDERLESS (F)
CN9050	1-566-639-11	o	4P, FEMALE "VR-5L CONNECTOR"
FB	1-543-157-00	s	BEAD, FERRITE
H9002	8-825-554-82	s	HEAD, CTL (PS244-21B) "CTL R/P"
H9003	8-825-770-72	s	HEAD, FE EF291-21 "FULL ERASE"
M9003	8-835-159-01	s	DC SP-0873 "THREAD"
M9004	8-835-261-01	s	DC BNF-1920A "CAPSTAN"
M9005	8-835-067-01	s	DC DNR-5300A "EJECT"
ME9001	1-520-495-11	s	LEVEL "CH-1/CH-3"
ME9002	1-520-495-21	s	LEVEL "CH-2/CH-4/BATTERY"
PM9001	1-454-382-11	s	PLUNGER "BRAKE"
PM9002	1-454-445-11	s	PLUNGER "PINCH"
S9001	1-552-504-00	s	ROCKER "POWER"
SP9001	1-503-293-21	s	SPEAKER

16-4. PACKING MATERIAL AND ACCESSORY (SUPPLIED)

Parts No.	SP	Description
18)A-6759-356-A	s	BRACKET ASSY, VTR
3-678-699-00	o	COVER (A), BRACKET
3-701-621-00	s	BAG, POLYETHYLENE (FOR VTR BRACKET)
7-682-159-09	s	SCREW +P 4x5
7-688-005-02	s	W 5, SMALL
X-3717-765-1	o	KNOB ASSY, ADJUSTMENT
19)A-6759-356-A	s	BRACKET ASSY, VTR
3-678-699-00	s	COVER (A), BRACKET
3-701-621-00	s	BAG, POLYETHYLENE (FOR VTR BRACKET)
7-682-159-09	s	SCREW +P 4x5
7-688-005-02	s	W 5, SMALL
X-3717-765-1	o	KNOB ASSY, ADJUSTMENT
3-676-269-00	s	CAP (50P SOCKET SIDE), DUST
A-6772-374-B	o	BELT ASSY, SHOULDER
3-701-613-00	s	BAG, POLYETHYLENE (FOR SCREWS)
3-701-632-00	s	BAG, POLYETHYLENE (FOR MANUAL)
3-701-637-00	s	BAG, POLYETHYLENE (FOR BVV-5)
3-717-823-01	s	COVER, BNC
3-718-047-01	s	CAP, 4P DROP PROTECTION
3-718-084-01	o	BOX, ACCESSORY
3-718-122-02	o	INDIVIDUAL CARTON
3-718-087-01	o	CUSHION (LOWER)
3-718-088-01	o	CUSHION (UPPER)
7-682-559-09	s	SCREW +B 4x5

16-5. FIXTURE (OPTION)

Parts No.	SP	Description
J-6001-820-A	s	DRUM ECCENTRICITY GAUGE (3)
J-6001-830-A	s	DRUM ECCENTRICITY GAUGE (2)
J-6001-840-A	s	DRUM ECCENTRICITY GAUGE (1)
J-6051-840-A	s	MULTI CONNECTOR CABLE
J-6080-008-A	s	CASSETTE REFERENCE PLATE
J-6080-011-A	s	REEL TABLE TENSION GAUGE
J-6080-013-A	s	DIRADIAL ADJUSTMENT SCREW
J-6086-570-A	s	FLATNESS PLATE
J-6087-000-A	s	DRUM ECCENTRICITY GAUGE (5)
J-6152-450-A	s	WIRE CLEARANCE GAUGE
J-6190-800-A	s	TENSION REGULATOR SLANTNESS CHECK TOOL
J-6321-040-A	s	SCREW DRIVER FOR MOTOR PULLEY (HW-104)
J-6322-421-A	o	DRIVER(TOOL),TG ADJUSTMENT
J-6322-421-3	o	TOOL,0.89 HEX
J-6331-120-A	s	FB(PLAYBACK) AMPLIFIER
Y-2031-001-0	s	CLEANING FLUID
2-034-697-00	s	CLEANING PISCE
7-732-050-10	s	TENTION SCALE (20g FULL SCALE)
7-732-050-20	s	TENTION SCALE (50g FULL SCALE)
7-732-050-30	s	TENTION SCALE (100g FULL SCALE)
7-732-050-40	s	TENTION SCALE (200g FULL SCALE)
7-732-050-50	s	TENTION SCALE (500g FULL SCALE)
7-732-902-00	s	INSPECTON MIRROR
8-960-096-51	s	ALIGNMENT TAPE CR2-1B PS
8-960-096-86	s	ALIGNMENT TAPE CR8-1B PS
8-960-096-91	s	ALIGNMENT TAPE CR5-1B PS
8-960-098-02	s	ALIGNMENT TAPE CR2-1PS
9-911-053-00	s	THICKNESS GAUGE
Standard Products		
	s	HEAD DEMAGNETIZER (HK-4)